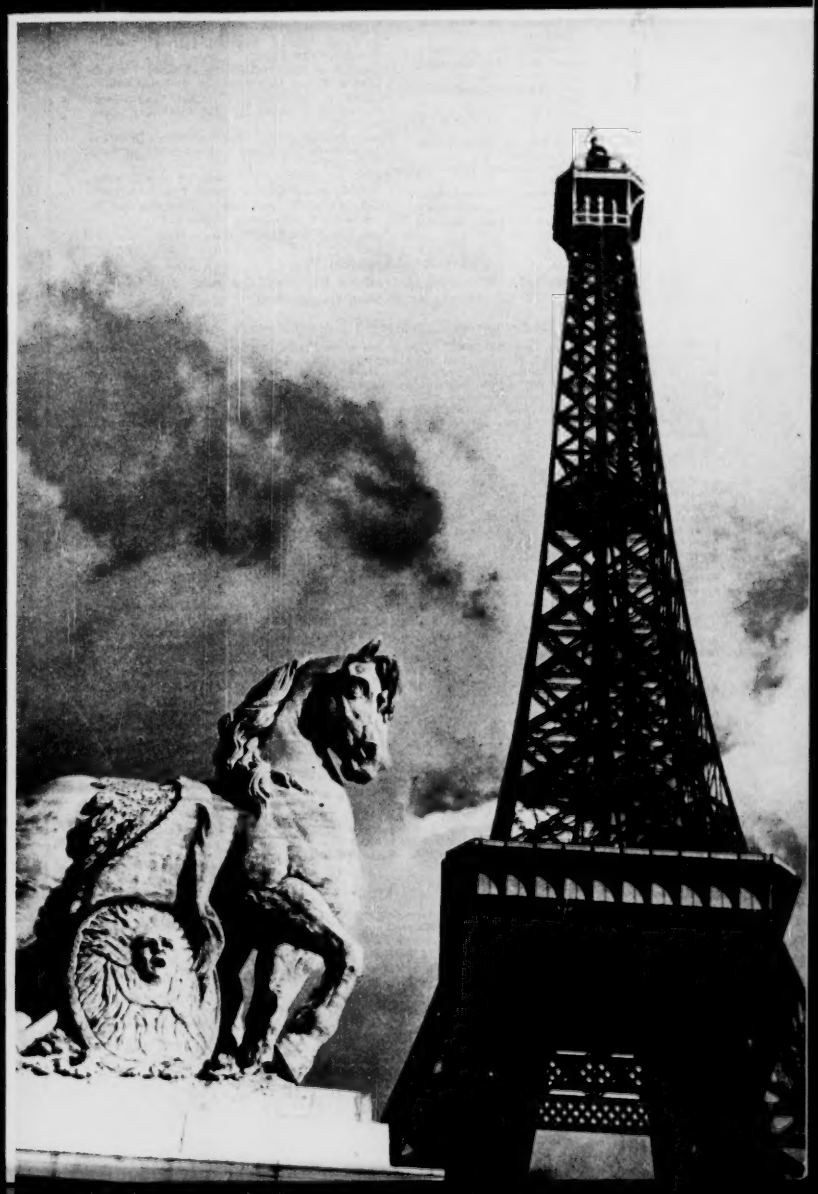
STANDARDIZATION

Formerly Industrial Standardization

News Magazine of the American Standards Association, Incorporated



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  Sheet Metal Screw Statistical Service
  U.S. Cap Screw Service Bur
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Readers Write

Pittsburgh Plate Glass Company
Pittsburgh, Pa.

To the Editor: We were happy to see your article "Color for Industrial Safety" in the July issue of STANDARDIZATION.

It is highly informative on the important subject of color codes. However, in reading the charts accompanying the article we noted that under "Suggestions from Paint Manufacturers" you list our company as making a few minor suggestions.

In regard to this, we would like to call your attention to the chapter on "Safety Color Code," pages 25 to 29 of the booklet *Color Dynamics*. This presents our recommendations for a code on this subject.

LARRY G. COONEY, CHIEF
Special Activities Section

• • With his letter Mr Cooney sent the 1947 edition of this booklet, which does indeed give an integrated and comprehensive plan for use of color for safety in industrial plants. In this code, yellow signifies "watch out," and in combination with black, identifies nonmoving objects which create hazards of striking against, stumbling over, or falling. Orange means "on guard" and is used on moving parts and cutting edges. Red is associated with fire protection equipment. Blue is suggested for "out of order," Green, generally associated with safety and medical practice, identifies locations of safety and first aid equipment. White is proposed for guide lines, indicating traffic lanes and storage areas.

A system for pipe line identification is also given, which concurs

Company Members

More than 2400 companies hold membership either directly or by group arrangement through their respective trade associations

Readers Write

Continued

in the main part with the recommendations of the American Standard Scheme for Identification of Piping Systems, A13-1928. A major difference is that it includes green, gray, black, and white for identification of piping for safe materials (drinking water, compressed air, steam below 212 F) where the American Standard specifies only green.

Our Front Cover

Among the most enjoyable highlights in the entertainment planned by the Association Française de Normalisation for the United States delegates was a dinner-dance in the Eiffel Tower. (See page 225 for Vice Admiral Hussey's report on the meetings of the Council and General Assembly of the ISO held recently in Paris.)

In our cover photo the Eiffel Tower is seen from one end of the Pont d'Iena, a bridge which crosses the Seine from the Tower on the Left Bank to the Palais de Chaillot on the Right Bank. The stone monumental horse is one of two flanking the entrance of the bridge. *A French National Tourist Office Photo.*

Picture Credits

Facing page 225—

Top Right: Watson-Flagg Machine Company Photo

Second Row Left: Ford Motor Company Photo

Second Row Right: Westinghouse Electric Photo

Third Row Left: James Sawders Photo

Opinions expressed by authors in STANDARDIZATION *are not necessarily those of the American Standards Association.*

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In This Issue

ASA
Reg. U. S. Pat. Off.

Ruth E. Mason, Editor

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Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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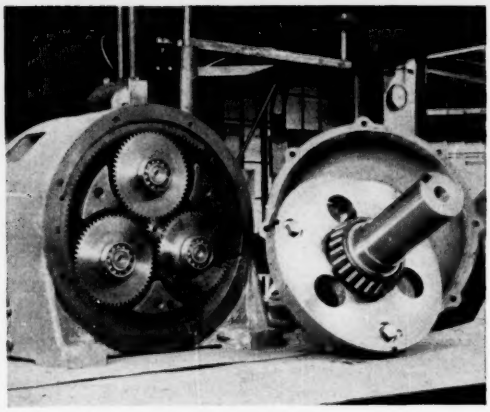
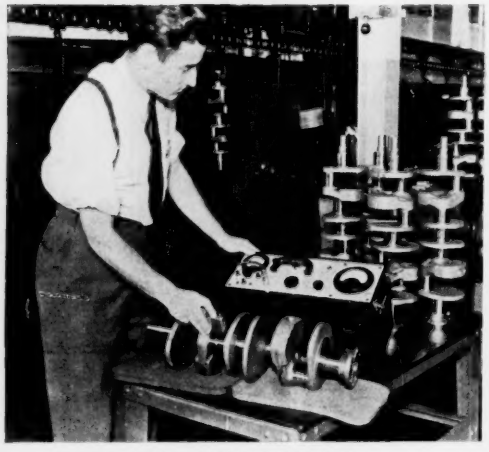
ISO

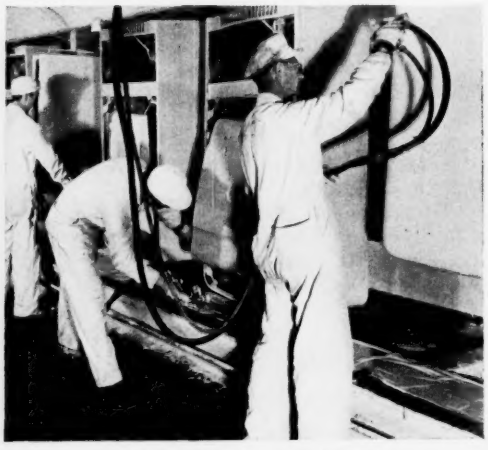
Projects Working For International Agreement Include...



Gears (ISO/TC 60)

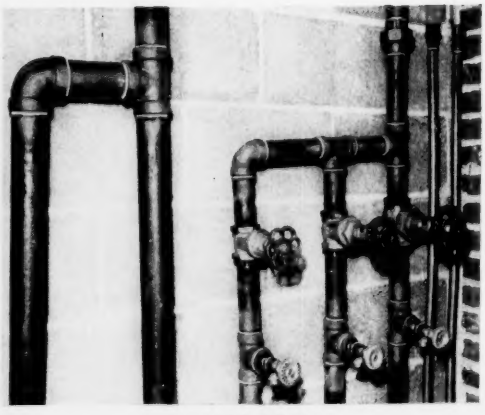


Surface Finish (ISO/TC 57)



Paints and Varnishes (ISO/TC 35)

Bolts, Nuts, and Accessories (ISO/TC 2)



Pipes (ISO/TC 5)

France Entertains Delegates at

The Meetings of the ISO

Standardizing bodies of 24 countries showed interest in international cooperation by sending delegates to the first meeting of the ISO General Assembly at Paris in July

By G. F. Hussey, Jr.

Vice Admiral, USN (Retired)

Vice Admiral Hussey, secretary of the American Standards Association, attended the meetings of the Council and General Assembly of the International Organization for Standardization July 5-8 at Paris, France, as one of the United States delegates named by the ASA. Meetings of technical committees of the ISO were held June 27 through July 4. The French national standardizing association, Association Française de Normalisation, was host for the occasion. Delegates from 24 countries were present.

POSSIBLY the outstanding feature of the ISO meetings in Paris was the excellent arrangements made by AFNOR for the meetings themselves, for the comfort, convenience, and entertainment of the delegates and the ladies who accompanied them. The meetings were held in the Maison de la Chimie, a building located near the Chamber of Deputies and particularly well adapted for a number of simultaneous meetings. On the entertainment side, there were receptions by the Chamber of Commerce of Paris, by the chairman of the Municipal Council in the City Hall, and by the President of France in the Elysee Palace. There was a Sunday spent visiting Versailles and that part of the country known as Ile-de-France, including a luncheon at the Casino at Engheim-les-Bains, a dinner-dance on the Eiffel Tower, and a nocturnal visit to the Louvre where many of the most famous ancient sculptures were illuminated to the best advantage.

The reports of the activities of technical committees will be covered in later issues of STANDARDIZATION. Perhaps the outstanding achievement in this field was the recommendation by ISO TC/1, Screw Threads, that the Unified Screw Thread adopted in November 1948 by the United States, the United Kingdom, and Canada, be adopted as the standard thread for all countries and that the profile of that thread be adopted for all countries.

The Council of the ISO, which is concerned primarily with procedural matters and with policy decisions, opened its session by taking note of the loss that the organization had sustained in the death of Gustave Gerard of Belgium, the late Vice President. On this occasion, General P. Salmon, French Commissioner for Standardization, read the speech which he had made at Mr. Gerard's funeral.

The Council approved the budget for 1950 as proposed by the treasurer, with the membership dues the same as for 1949. It also appointed a finance committee to examine the finances of the organization in the light of considerable discussion on this matter. The committee is to report to the Council at an early date. The finance committee as appointed includes the ISO treasurer and delegates of the French, Norwegian, and Belgian member bodies.

Committee to Study Liaison With Other Groups

A considerable amount of time was devoted to discussion of relations between the ISO and other international bodies, particularly those having interests touching on the field of standardization. Reports from the liaison officers appointed between the ISO and the United Nations Economic and Social Council and the International Labor Organization were received and discussed. As a result, additional members were named to the committee concerned with liaison between ISO and other international organizations, except the UN. This committee currently consists of Mr Percy Good of the United Kingdom and Mr Kaare Heilberg of Norway. It was augmented by the addition of Engineer General Salmon of France, Mr Willy Ruggaber of Switzerland, and the chairman of the Finance Committee. This committee is to consider the broad question of liaison with international organizations and to report in time for consideration of the report by member bodies in advance of the 1950 council meeting.

The report prepared by Mr E. A. Pratt[1] and proposed for submission to the United Nations General Secretariat was discussed in detail and adopted subject to certain minor alterations, chiefly in the matter of providing additional information in the report. The report calls attention to the need for coordination of the standardization activities of various UN agencies.

The Council then turned to the question of technical committees and their work, approving the report of the general secretary on technical work. Mr Saint Leger reported that the participation in the work of technical committees on the part of member bodies has almost doubled during the past year. The Council approved those scopes outlining the work to be undertaken which have been approved by the technical committee concerned.

The scope proposed by the United Kingdom for ISO TC/20, Aviation,

[1] Mr Pratt, Consulting Engineer in New York, is liaison representative of the ISO to the United Nations. A discussion based on his report was published in STANDARDIZATION, May 1949, page 124.

Member Bodies of the International Organization for Standardization

Australia—Standards Association of Australia
Austria—Oesterreichischer Normenausschuss
Belgium—Institut Belge de Normalisation
Brasil—Associação Brasileira de Normas Técnicas
Canada—Canadian Standards Association
Chile—Instituto Nacional de Investigaciones Tecnologicas y Normalizacion
China—National Bureau of Standards
Denmark—Dansk Standardiseringsraad
Finland—Suomen Standardisoimislautakunta
France—Association Française de Normalisation
Hungary—Magyar Szabvanyügyi Intézet
India—Indian Standards Institution
Israel—The Standards Institution of Israel
Italy—Ente Italiano di Unificazione
Mexico—Secretaria de la Economia Nacional
Netherlands—Hoofdcommissie voor de Normalisatie in Nederland. Centraal Normalisatiebureau
New Zealand—New Zealand Standards Institute
Norway—Norges Standardiserings-Forbund
Poland—Polski Komitet Normalisacyjny
Portugal—Repartição de Normalização
Switzerland—Association Suisse de Normalisation
Sweden—Sveriges Standardiseringskommission
Czechoslovakia—Ceskoslovenska Spolecnost Normalisacni
Union of South Africa—The South African Bureau of Standards
United Kingdom—British Standards Institution
United States of America—American Standards Association, Incorporated
Union of Soviet Socialist Republics—Vsesojuznyj Komitet Standartov

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was approved with the understanding that when the committee is organized it may revise the definition of its proposed activities. As defined at present, the work will cover aircraft component parts and equipment which require replacement, servicing, and maintenance. The secretariat for this committee was assigned to the United States.

Responsibility for agricultural tractors was assigned to ISO TC/22, Automobiles, of which AFNOR holds the secretariat. The secretariat for ISO TC/26, Copper and Copper Alloys, was assigned to the United Kingdom. The question of Oil Measurement Tables was assigned to TC/28, Petroleum Products, with the understanding that the work would be handled in full consultation with ISO TC/12, Quantities, Symbols, Units and Conversion Tables, so far as concern any features relating to the work of the latter committee. The secretariat of ISO TC/31, Tires and Rims, was assigned to the United Kingdom, and the committee was requested to prepare a draft scope for circulation in order to facilitate the decisions of member bodies with regard to participation.

ISO TC/34, Agricultural Products, having proved to be so broad a subject, member bodies were requested to submit proposals for projects in the agricultural field for which individual technical committees would be established.

Because of lack of interest in the proposals for standards in the field of printing, and of watches and clocks, these proposals were deleted.

The decision of ISO TC/59, Building Construction, to continue as a technical committee and not to establish a technical division for building was approved. New technical committees, one for hydraulic binders, with the French member body as secretary, and one for concrete and reinforced concrete, with the Austrian member body as secretary, were approved in principle.

The proposal for a technical committee on textile machinery was approved with Switzerland assigned as the secretariat. Proposal for a technical project on noise measurements was approved and the work was allocated to ISO TC/43, Acoustics, for which the United Kingdom holds the secretariat.

On the recommendation of the Russian member body, to which had been assigned the secretariat for ISO TC/37, Terminology (General Principles and Coordination), the committee was deleted from the list of technical committees and each technical committee was instructed to deal with terminology questions in the field of its own work, with the general secretariat providing such coordination as might be feasible.

The directives for ISO technical committees were amended by making Paragraph E.3.3. read as follows: "Only delegates officially nominated by the (P) [participating] member bodies and the representatives of other organizations officially invited may participate in the meeting. (Plus) [interested nonparticipating] bodies may nominate observers who may attend the meeting and upon invitation from the chairman, may participate in the debate."

The secretariats of technical committees 1 through 67, which had not already prepared scopes, were to be requested by the General Secretary to do so without delay.

Next Council Meeting at Geneva in 1950

The Council decided that the next Council meeting would be held in Geneva during a week in June or July 1950, as found most convenient by the working committee.

The committee on the revision of the constitution and rules of procedure had, after four days of meetings, presented its report, which was produced by the ISO secretariat in all three official languages in a remarkably short time. The chairman, Mr W. Rayner Hebblewhite of Australia, noted that the report covered only the most important changes to the constitution and rules of procedure and that certain others had been left for future consideration. There being insufficient time during this session of the Council for consideration of the report of the committee, members of the Council were requested to examine the report and to advise the new chairman of the committee (Vice Admiral Hussey, ASA) of comment and recommendations, as well as any additional items which should be considered. The Council further assigned to this same committee the responsibility of preparing recommendations for the membership of the Council as provided in the third paragraph of Clause 3 of the Rules of Procedure. It may be recalled that at the end of five years, the permanent Council memberships of China, France, UK, USA, and USSR will expire. Prior to that time recommendations must be made by the Council to the member bodies for determining the mem-

bership of the Council thereafter.

The day of July 7 was devoted to the General Assembly. In the forenoon there was held a ceremonial meeting in the Sorbonne—the seat of the University of Paris. This meeting was attended by the President of the Republic of France and a large number of members of the French Government and of the diplomatic corps accredited to Paris. Addresses were made by General Salmon, as Commissioner of Standardization of the French Government; Mr Howard Coonley of the ASA, as President of the ISO; Mr Albert Caquot, President of AFNOR; and Mr Torres Bodet, Director General of UNESCO. The meeting was exceedingly well attended, there being very few vacant seats in the large auditorium. Mr Coonley's remarks appear elsewhere in this issue. (See page 231.)

The meeting of the General Assembly was attended by representatives of all member bodies except Canada, Chile, and China. After an address of welcome by General Salmon, Mr Coonley, as President of ISO, took the chair. The principal discussion in the Assembly concerned the report on ISO-UN relationship, as prepared by Mr Pratt and as modified by the Council. No decision was reached as to the date or place for the next General Assembly, it being felt that two years was ample notice to both host and members. Accordingly, the decision will be made at the next meeting of the Council which will be held in Geneva, 1950.

The meeting of the General Assembly had to be cut somewhat short in order that the delegates might keep their appointment with the President of France. In the course of the reception, each of the delegates was presented to M. Auriol. He made an impromptu address based largely on the remarks made that forenoon at the Sorbonne and indicating a very considerable grasp of the problems which the ISO was established to solve. In the evening, AFNOR was host to the delegates and their ladies at a farewell banquet held at the Inter-Allied Club.

The schedule for the Council was so crowded as to throw an undue burden on the translating and reporting staffs and to preclude full consideration of the various problems before the Council. Accordingly, the Council agreed that for the 1950 meeting, a five-day schedule would be established with the expectation that actual meetings would occupy not more than two-and-one-half to three days of the five, thus allowing intervening time for subcommittee work, study of reports, and preparation of minutes.

The size of the delegations attending the various meetings was notable, ranging from 67 from France to 1 each from India, New Zealand, Brazil, and Denmark. The United States delegation included 11: Mr Coonley, as President of ISO; Vice Admiral Hussey, Secretary of the ASA; Dr John Gaillard, ASA staff; Mr George S. Case, Chairman of the Board of Lamson & Sessions; Mr A. L. Bergstrom, Mr M. B. C. Nicoll, and Mr R. M. Riblet of Timken Roller Bearing Company; Mr Fayette Leister, Fafnir Bearing Company; Mr W. H. Gourlie, Sheffield Corporation; Mr R. F. Holmes, AC Spark Plug Division of General Motors Corporation; and Mr Irvin H. Fullmer, Secretary of the Interdepartmental Screw Thread Committee, National Bureau of Standards.

Some Typical ISO Projects

As reported by the national standardizing bodies that hold the secretariats. From articles published in the special ISO number of "Courrier de la Normalisation" (AFNOR's official magazine)

Australia—

Pallets for Unit Load Method of Materials Handling. ISO/TC 51

The importance of loading pallets for storage of materials and direct handling by fork lift trucks was shown by the intensive use made of them in Australia during the last war.

Considerable advantages would result from international adoption of a single standard size pallet.

The Standards Association of Australia has been put in charge by ISO of the technical secretariat of this committee and is anxious to centralize information concerning the practice and developments introduced in the various countries.

Belgium—

Gears, ISO/TC 60

Reported by Henry Deby, Technical Councilor of the Mechanical Service of the Beglian Institute for Standardization

The importance of gears in mechanical engineering and the necessity of providing spare parts for machines built in other countries provides the reason for the international standardization of gears. The scope of this international committee provides that the work covers all gears encountered in normal practice: Spur gears with straight and helical teeth: bevel gears with straight teeth: worm screw wheels and tangent screws.

The first of these is now under examination. The program deals with terminology and notations, rated dimensions, tolerances and errors and possibly, in agreement with ISO/TC 29, Small Tools, standardization of gear-cutting tools.

It can be assumed that no difficulties will arise in connection with determining the rated dimensions of spur gear teeth, because a certain degree of standardization was already achieved on the basis of Brown & Sharpe tools.

United States of America—

Photography, ISO/TC 42

Cinematography, ISO/TC 36

Reported by Vice Admiral G. F. Hussey, Jr., Secretary, American Standards Association, Incorporated

The American Standards Association accepted the Secretariat of the Committee on Photography of the International Standards Association in 1937, but it was not possible to undertake international standardization work before the war. However, national standardization in the United States was very actively carried on during the war, due to the importance of photography in the war

From the statement by Engineer General P. Salmon, French Commissioner for Standardization, in the special ISO number of the *Courrier de la Normalisation*, AFNOR's official publication.—

"The object pursued by international standardization is, it is true, to obtain general uniformity, even within limited fields. Business relations will be considerably simplified, exploitation of equipment will be greatly improved, a large number of causes of loss of time and wastage of all kinds will disappear. . . . However, under present conditions it will be many years before this Golden Age is reached. But, without for the time being, aiming so high, it is worth while to stress that the mere fact of the common study of the most outstanding technical problems is productive in itself."

By Henry St Leger, Secretary General of the ISO—

"There is no political problem in our standardization world: I am therefore more than ever convinced that ISO can help make this world a better one. Our mission is the exchange of information, be it research, study, or experience."

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effort. After hostilities had ceased, the ASA submitted to the ISO a scope of work which was agreed to by all the national standardizing bodies participating in this work. Eleven American Standards were circulated to the member countries. Two of these have been agreed to by all who have replied up to the present time. These two are the American Standard Method for Determining Photographic Speed and Exposure Index, Z38.2.1-1947 and American Standard Diffuse Transmission Density, Z38.2.5-1946.

Photographic Speed is a sensitivity characteristic of film which is directly related to picture-taking practice. The Exposure Index is a value related directly to the exposure normally required for taking a picture, and is of greater use to most photographers than speed, which represents a more basic concept. In the United States exposure meters are calibrated according to the standardized Exposure Indexes. It is hoped that through the work of ISO/TC 42 a similar result may be possible throughout the world. Diffuse Transmisison Density is a concept used in the design of instruments needed for determining Photographic Speed and Exposure Index.

As Secretariat for ISO/TC 36, Cinematography, the ASA submitted to the countries that are members of this committee 10 American Standards which affect the interchangeability of motion picture film in projectors.

France—

Standardization in the Sphere of Banking. ISO/TC 68

Reported by Charles Prevot, Honorary inspection general of the Bank of France, former president of the Committee on Study of the Technique and Standardization of Banking.

The necessity of facilitating banking work has caused several countries to study the question of banking standards. For this reason the ISO organized the technical committee on standardization in the sphere of banking. This comes at an opportune time because international relations resumed since the war show promise of further development and at the same time the results obtained through standardization in a few of the countries have aroused the interest of others. This interest is expected to lead some of them to undertake similar studies that in their turn will result in national standards. The work of this committee is opportune in order to avoid the adoption of different standards in the various countries, which would defeat the aim of simplification on the international plane.

The scope of the committee's work will be to simplify banking operations, to unify the general form of documents as much as possible, and to define accurately the terminology, sizes, wording, and characteristics of documents.

AFNOR collects all the standards and recommendations sent by the various countries and has drawn up a tentative list of standards of France, Germany, Italy, United Kingdom, United States.

The legislation and customs peculiar to each country will have to be taken into consideration by the committee. Other difficulties encountered are technical vocabularies which differ according to language and non-unified basic paper sizes.

Standardization work in the sphere of banking has been going on for the last 15 years in France, and 73 standards are now in effect in that country.

Hungary—

Upholstery Material. ISO/TC 40

Reported by M. G. Kerekgyarta of the Hungarian Standards Institute

This committee was originally set up by the former International Standards Association in 1936 at the suggestion of Hungary. Three meetings were held before the war and up to the present time the committee has studied quality or raw hair, hair testing methods, impurities, and resiliency. The war prevented carrying out washing tests proposed by England for determination of components soluble in water. Hungary is now considering making tests on different qualities of hair coming from various countries (Argentina, Australia, India, Mexico, Sweden, Union of South Africa, United Kingdom, United States, USSR). Among the items to be taken up in the committee's future work are: Study of organic disintegration products; dosage of fatty material; search for impurities coming from blood. Study of these items must await completion of the washing tests, however.

India—

Mica. ISO/TC 56

Reported by Dr Lal C. Verman, Director, Indian Standards Institution

Production figures for mica throughout the world show that the United States and India are the largest mica producing countries in the world. However, the greater part of the America mica is crushed and used as a pigment. Indian mica comprises a large percentage of the higher grades in demand in various industries, particularly in electrical construction.

The United States is the largest consumer of high grade mica, and possibly of other forms as well. Its principal supplier is India.

The Indian mica producing industry has set up and adopted fairly uniform standards for the grading and classification of mica, thus facilitating international trade. These standards have been accepted to some extent by other countries. On their part, the organizations concerned in the United States have set up standards, although no serious effort has been made to bring these standards to the attention of producers. The Indian Standards Institution is now actively engaged in bringing all national and international groups concerned with mica into agreement and has established a program of work

which has been sent to all ISO member countries.

Norway—

Screw Threads for Glass Containers. ISO/TC 63

Reported by Kaare Heiberg, Director, Norwegian Standards Association

It is impossible in many cases to replace a broken or lost stopper or lid for a bottle or other glass container because of the difference in screw threads. This wastes bottles which otherwise could be used again, a disadvantage which was greatly felt during the last war.

The standardization committees of the Nordic countries—Denmark, Finland, Norway, and Sweden—forming the Inter-Nordic Standardization Conference (INSTA) have already adopted common standards for screw threads for glass containers based on preferred numbers. Technical Committee ISO/TC 63 was formed on the suggestion of these four countries to study the extension of these standards on a world plane, since glass containers are objects of international trade. The revised standard adopted at the INSTA conference in Oslo in October 1948 will be proposed as a preliminary basis for international study.

The fact that this Nordic system is based on metric measurements should not give rise to any serious objection to its adoption by countries using inch measurements, for the following reason: preferably, only *nominal* dimensions should be expressed in round figures; on the other hand, only the *actual* dimensions, as given by the upper and lower limits, are of importance for the manufacturer; and in general, in both systems these actual dimensions will be odd, and not round, figures.

By rounding off the numbers more broadly, round figures could be obtained in both metric and inch systems for the *nominal screw thread* diameters used for identification, unless the identification be made simply by numbers which could be identical in both systems.

In view of the widespread household use of glass containers with screw lids or stoppers (in particular for medicines and chemicals), their international standardization would be a striking example of the usefulness of ISO's work, even for the "man in the street."

Poland—

Bolts, Nuts, Accessories, ISO/TC 2

Reported by Dr Waclaw Moszynski, Secretary of Committee ISO/TC 2.

A working method is contemplated for establishing a proposed standard for nominal linear dimensions in mechanics. Using the standards of the various countries, broken lines are traced on a logarithmic scale, enabling the determination of a standard line with stepped profile and the setting up of tables.

The project will also include proposals for standard lengths of bolts and of their threaded portion. Other proposals relate to tolerances, the ISA system being applied to the broadest extent. A general classification of manufacturing materials would also be proposed.

The last part of the scheme will concern details of execution, such as sizes of passage holes, depths of threaded holes, diameters and depths of holes for placing heads, etc.

United Kingdom—

Textiles, ISO/TC 38

Reported by A. W. Bayes, MSc., F.T.I.

Although there has been less standardization in textile than in certain other industries, important work has been accomplished on a national plane in several countries. The indispensable international coordination has now been taken in hand, and at the meeting in Buxton, England, last year agreement was reached on certain points and the way prepared for others.

Mention should again be made of the international agreement on the description of the direction of twist, for which the letters "S" and "Z" are to replace the numerous descriptions now in use. Another question nearing agreement is on the description of yarn fineness by the use of metric units.

A great deal of work must be done in rationalising terminology, beginning with national terminologies. Among testing methods, the most important are tensile strength testing and mercerisation.

Sweden—

Bearings, ISO/TC 4

Reported by M. Palmgren, Doctor in Technology.

The first standardization of bearings was limited to establishing the principal dimensions, such as bore, external diameter, width, and radius of curve. An attempt was made in 1939 by ISA 4 Committee to extend this, for ball and roller bearings a general plan has been followed since 1940. A similar method is recommended for bevel roller bearings and thrusts.

The method applied by Sweden, in charge of the Secretariat of ISO/TC 4, has been studied. Small bearings —with a bore less than 3 mm—will also be studied and later spherical, ball and roller bearings, bearings with one, two or more rows of cylindrical rollers and needle bearings.

Switzerland—

Pipes, ISO/TC 5

Reported by W. Kuert, Secretary of the Swiss Association for Standardization.

Standards for water and steam pipes were set up in Germany as early as 1882. And the British Engineering Standards Association, in 1904, published pipe standards. Since that time and after the constitution of ISA substantial results were obtained at several international conferences.

Standardization of pipes applied essentially to the distribution of pressures over rated diameters, connections and flanges. Three working pressures correspond to each rated pressure in relation to the nature and temperature of the fluids to be transported. The rated diameter characterises all standardized piping components, such as pipes, flanges, cocks, connections and moulded parts. With a view to simplifying manufacture and storage, the same flange diameters were adopted for several rated pressures.

Union of Soviet Socialist Republics—

Surface Finish, ISO/TC 57

Reported by P. E. Diatchenko, Doctor of Technical Science.

Work in the U.S.S.R. in the field of surface finish was reviewed: 1930, the luminous section method; 1933, the micro-interferometer and microprofilometer; and, later, the optical-mechanical profilographs.

A summary was given of Government Standard 2789-45, which is based on the determination of the average quadratic divergence in relation to the median line of irregularities.

The influence of micro-geometry of the surface of cutting tools on the finish of the machined surface has been found to depend upon the roughness of the surfaces, the cutting edge, and the radius of the curve of the cutting edge.

Extensive work has been done in the study of the influence produced on surface finish by the different parameters which govern machining. The most important factors are found to be the cutting speed and the heat emitted.

ISO—Agency for World Peace

Unified standards remove unnecessary barriers to international trade

By Howard Coonley

Mr Coonley, president of the International Organization for Standardization, welcomed delegates of 24 nations at the Ceremonial Meeting in honor of the International Organization for Standardization at the Sorbonne, Paris, France, July 7.

"It is fitting that the first meeting of the General Assembly of ISO should be held in the capital of France, a nation which has contributed so much to civilization, which has been the scene of many of the great movements of the world," he said. "On behalf of all the membership of ISO I express grateful thanks to the members, officers, and directors of Association Francaise de Normalisation for making this possible."

THIS meeting of the Assembly of the International Organization for Standardization is an event of outstanding significance. Here are brought together delegates from 24 nations stretching over the principal areas of the world. Yet, as far-flung as their scenes of activity are, they are here with a single purpose—to erect a structure that will make possible an orderly flow of goods and services through the channels of global trade, so that nations, large and small, may cooperate to their mutual advantage.

Over a period of generations, international trade freed from unnecessary barriers will have a fundamental influence for world peace and security. For there is no key that will so quickly open the door of mutual understanding as an exchange of materials and finished products on a basis that assures profit to both buyer and seller.

". . . a broad science and a powerful industrial tool"

We are here on a scientific and industrial mission. For standardization is indeed a broad science and a powerful industrial tool.

Through science the lives of the people of a vast portion of the world have been enriched. It is only within the last century and a half that the ingenuity of the human brain has been applied to easing the drudgery necessary to provide for meagre sustenance. Then, as this burden was lifted, the genius of science was turned to the production of goods that would make life more pleasant. At first the effort was largely individual but as the demand for research and experiment developed, men of science exchanged their ideas and pooled their interests. They set up laboratories equipped with modern instruments so that their experiments could be expedited and progress measured.

As science has advanced, rules have been set up to guide industrial processes and to avoid unnecessary waste. These rules have emerged in the form of standards that have greatly simplified the processes of industry and have substantially increased the products of human labor. All of these advances tend to raise the standard of living of people generally.

At first these standards were local. Later they became national. In the early part of this century the movement became international.

ISO provides today the crucible into which can be poured the best standard practices of the progressive nations of the world and out of which will be poured a refined product that should be of universal benefit to mankind. The purpose of the ISO is to unify the standards of the countries that are members, so that each country can profit from the experience of others and, even more importantly, so that the ideas and the products of each can readily be exchanged and shared by all. In other words, the aim of ISO is to bring about the closest cooperation and achieve the greatest good for all nations alike.

The organizational structure of ISO is simple, as are the methods it employs to carry on its work. It consists of a General Assembly made up of delegates from all its membership, which meets once every three years. From the entire membership eleven are chosen to act as a Council, which meets at least once a year and which is in effect the ISO Board of Directors. Five of these Council members from the largest nations serve for a term of five years. The other six serve for three years. The officers elected by the Council for three-year staggered terms are a President, Vice-President, and Treasurer, who also constitute a Working Committee whose duties are limited, and carefully defined. The chief administrative officer of ISO is the Secretary General. The headquarters of ISO are in Geneva, Switzerland.

In 1947 the International Electrotechnical Commission, which since 1901 had been a most effective independent group, affiliated with ISO and became this organization's electrical division, while at the same time maintaining its autonomy.

Interest of UN Agencies Is Spur to Move for Cooperation

It is significant of the ever growing importance of standardization that many of the agencies of the United Nations are concerned with standards in much of their work. It, therefore, became a matter of great importance that effective cooperation should be established between these agencies of the UN and ISO. It is, therefore, most fortunate that official cooperative relations have been established—first of all with the Economic and Social Council of the United Nations, which has granted official consultative status to ISO as a nongovernmental body.

Recognizing the importance of working cooperative relations, several of the specialized agencies sent representatives to the meeting of the

ISO Council in Zurich in 1947. Working cooperative relations have now been established with the Council by the following:

Food and Agricultural Organization (FAO)
Economic Commission for Europe (ECE)
International Civil Aviation Organization (ICAO)
International Labor Organization (ILO)
United Nations Educational Scientific and Cultural Organization (UNESCO)
World Health Organization (WHO)

These cooperative relations with the agencies of the United Nations are bound to be of great importance both to the governments and industries of the various countries.

Direct but less formal cooperative relations have been established with several nongovernmental organizations interested in standards. These include such organizations as:

International Dairy Federation (IDF)
International Federation on Documentation (FID)
International Commission on Illumination (ICI)
International Institute on Welding (IIW)
International Wool Textile Organization (IWTO)

The method followed by ISO in developing unified standards is to set up technical committees in those product fields which a majority of the Council feel worthwhile, invite all members to participate, but carry on the project only when five or more countries agree to take an active part. One of the participants agrees to assume the responsibility of the Secretariat of the project. It is the obligation of each technical committee to develop a scope or "terms of reference" for its project, it being necessary for this scope to be approved by a majority of the Council before work is actually undertaken. At present there are 69 technical projects being carried on. In the years to come there should be many times that number.

It is evident from this very brief review that ISO is embarked on a program of great significance and of broad application. It is a program that cannot be accomplished rapidly, for before each project is completed it must be weighed, measured and adjusted on the basis of the current techniques and the existing mechanical equipment of each of the participating countries. Therefore, each completed standard involves a strong measure of "give and take." The decision arrived at can have been reached only by an open-minded attitude on the part of each participant.

As I indicated in my opening words, the real aim of ISO is to unify the standards of the most important products of the nations of the world, thereby making possible unhampered and friendly international exchange of goods and services to the end that understanding and peace may come to our war-worn peoples.

To me it seems that the men of science and industry involved in this great undertaking can have a profound influence on the course of future events. For, as representatives of their 27 nations, in a sphere that is technical and has no political implications, they can prove that the nations of the world can compose their differences and work in harmony one with another.

Interpretation Committee Will Answer Queries on Plumbing Code

The American Society of Mechanical Engineers and the American Public Health Association have announced the appointment of a five-man Interpretation Committee to answer all inquiries as to the intent of the provisions of the recently approved American Standard Plumbing Code of basic minimum requirements.

Chairman of the committee, which will act as the final word on the meaning of the code, is A. H. Morgan, director of the Division of Building Management, Department of Public Works of New York City. Other members are: C. A. Holmquist, former director of the Division of Sanitation, New York State Department of Health, now retired, who represented the Department of Health and the Conference of State Sanitary Engineers in the preparation of the code; M. Warren Cowles, health officer; F. M. Dawson, dean of the College of Engineering, University of Iowa, and V. T. Manas, of the Housing and Home Finance Agency, U. S. Department of Commerce.

Drafted by a committee representing 30 cooperating organizations under the sponsorship of the ASME and APHA, the code has been adopted by the American Standards Association. It is the result of 11 years' effort and represents what medical and technical men agree are the minimum requirements for safety and health.

ASA Budget and Financing Plan To Be Discussed September 30

The Finance Committee of the Board of Directors of the ASA will meet on September 30 at ASA headquarters, Room 5928, Grand Central Terminal Building, with representatives of trade associations, technical societies and companies currently participating in the financing of ASA to discuss the budget program and financing plan for 1950.

Preliminary to this conference, ASA's "Blueprint for 1950," which contains a detailed analysis and study of contemplated activities for the coming year, supported by budget requirements, will be published and circulated to Member-Bodies, Associate Members and Company Members of the ASA.

Each supporting organization of the ASA will be asked to express its views on the proposed program and to state its position, in order that agreement may be reached on what financial support may be forthcoming.

The Finance Committee is prepared to discuss in advance of the September 30 meeting any questions which may arise relative to the interests of any of ASA's supporting members.

The language of graphical symbols is being enlarged and revised, giving architects, engineers, and contractors an improved method of specifications. In the compilation and development of these standards, simplification and clarification was the aim—to produce what industry will find most helpful in the way of Graphical Symbols . . .

Standard Oil Co. (N. J.)

For Use on Drawings

By William J. Kunz

Mr. Kunz is manager of drafting of Combustion Engineering-Superheater Inc. and vice-chairman of ASA Sectional Committee Z32 on which he represents the American Society of Mechanical Engineers. He has been very active in the work of Subcommittee 1 on Symbols for Use in Mechanical Engineering of which he is chairman; Subcommittee 3 on Abbreviations for use on Drawings.

Mr. Kunz is a member of ASA Sectional Committee on Refrigeration Nomenclature, B53, and on ASA Sectional Committee on Standards for Drawings and Drafting Room Practice (Exclusive of Architectural Drawings), Z14.

AS the engineering requirements of American industries have increased, particularly in the period during and since the war, it has been necessary to enlarge and revise the language of graphical symbols. In consideration of these requirements the ASA Sectional Committee on the Standardization of Graphical Symbols and Abbreviations for Use on Drawings, Z32, which is sponsored by the American Institute of Electrical Engineers and the American Society of Mechanical Engineers, has been engaged in developing, enlarging, or revising, when necessary, the American Standards for graphical symbols.

Subcommittees' Work Is Nearly Completed

Some of the most active work has been carried on by the subcommittee responsible for the standardization of symbols for use in mechanical engineering. Since early 1947 this subcommittee has worked on the amplification and revision of the graphical symbols formerly known as Z32.2-1941. With the issuance of these revised standards in the early fall of this year almost all of the subcommittee's work will be completed.

The standards which will be made available as a result of this work are now divided into six groups—plumbing; pipe fittings, valves, and piping; heating, ventilating, and air-conditioning; railroad equipment; heat-power apparatus; and welding.

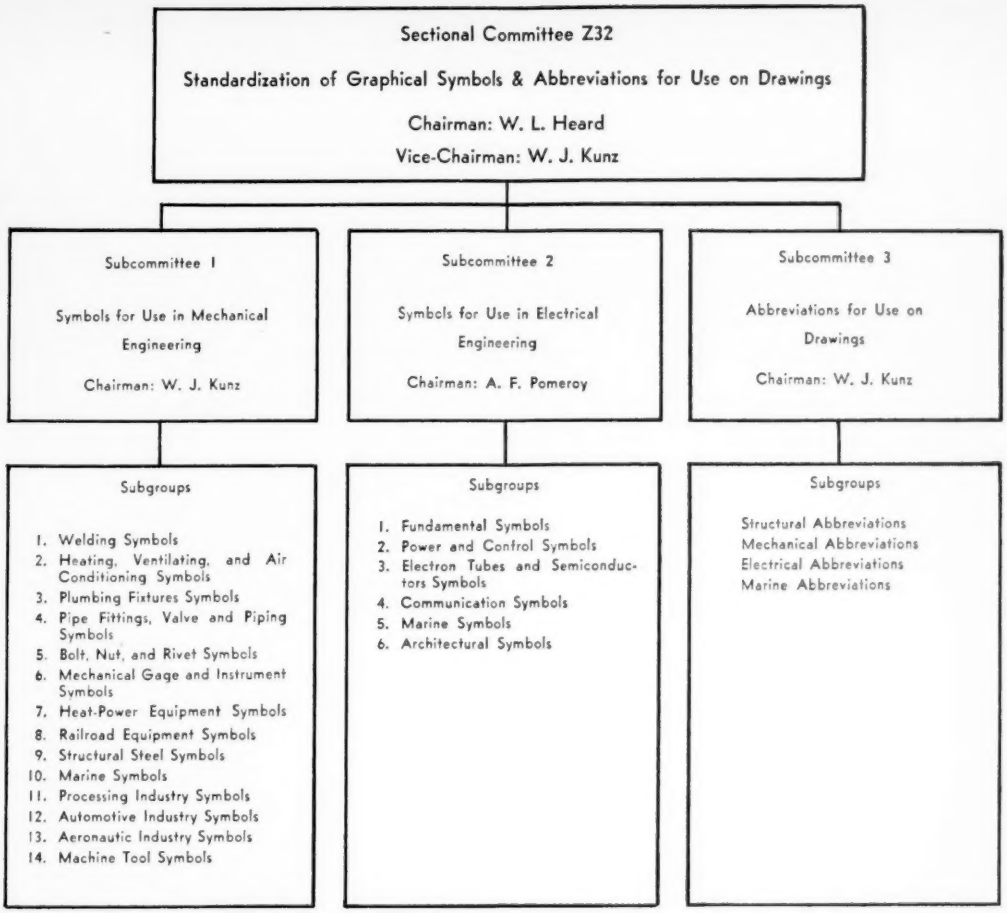
The American Standard Graphical Symbols for Plumbing, Z32.2.2, gives architects, engineers, and plumbing contractors a standard method of indication for plumbing fixtures and allied items.[1] The 69 symbols listed are nationally recognized in the plumbing field and are presented as the present day minimum requirement. To ensure the clarity of these symbols, letters identifying them are used only to distinguish various items of equipment in order to define their application.

The American Standard Graphical Symbols for Pipe Fittings, Valves, and Piping, Z32.2.3, contains an enlarged list of 71 symbols which has been brought up to date to contain the symbol standards required by present day industry.[2] Because in the field of piping there are many existing symbols that are not presented here, the 71 symbols are shown as a minimum list. Other piping symbols were not presented because it seemed impossible to get a consensus at the time this standard was revised. In the case of various petroleum fields where practices vary to a great extent no uniformity can as yet be established.

The American Standard Graphical Symbols for Heating, Ventilating, and Air-Conditioning, Z32.2.4, has been expanded to meet the ever growing requirements of all of the indus-

[1] The revision of this standard was the work of Subgroup 3 on Plumbing Fixtures Symbols headed by O. E. Willis, Mechanical Engineering Consultant, of the Bureau of Architecture of the New York Department of Public Works.

[2] The work on the revision of this standard was carried on by Subgroup 4 on Pipe Fittings and Valve Symbols headed by L. W. Benoit of the Manufacturers Standardization Society of the Valve and Fittings Industry.



tries of these fields.[3] This standard includes 81 symbols as a minimum requirement. Its air-conditioning symbols were coordinated with the compilation made by the ASA Sectional Committee on Refrigeration Nomenclature, B53.

To be issued for the first time is an American Standard Graphical Symbols for Railroad Equipment, Z32.2.5, which has been compiled from approved and accepted lists contained in the standards of the Association of American Railroads.[4]

A proposed American Standard Graphical Symbols for Heat-Power Apparatus, Z32.2.6 contains 44 symbols as the minimum list.[5] There are several symbols in the field of heat-power equipment which are not presented in this standard because they do not seem to have national acceptance at this time. In spite of omissions, this standard has been considerably expanded over the previous issue and is suited to the whole industry.

The American Standard Welding Symbols and Instructions for Their Use, Z32.2.1,[6] covers nationally recognized symbols for the welding field. These were adopted as a standard of the American Welding Society before approval as an American Standard under ASA procedure.

This sectionalization of Z32.2-1941 into six different classifications was made so that industries can make use of the section which pertains to their problems without having to accept the other sections which are of no interest to them. For those interesied in all of the sections, the standards will be obtainable in one folder.

In the compilation and development of these standards an attempt was made to simplify and clarify the symbols themselves as well as their classifications. Eliminated were the two different weight lines, heavy and light, which were used in drawing the symbols in the 1941 version of the standards. Now one weight line which is neither heavy nor light has been adopted. These revisions were made to save drafting time.

(*Continued on next page*)

[3] L. L. Munier of Wolff and Munier, Inc, representing the Heating, Piping, and Air Conditioning Contractors National Association, is chairman of Subgroup 2 on Heating, Ventilating, Refrigeration, and Air Conditioning Symbols which revised this standard.

[4] The subgroup 8 on Railroad Equipment Symbols, headed by B. F. Dickinson of the Pennsylvania Railroad, developed this proposed American Standard which has not yet been approved.

[5] J. M. Barnes of the Philadelphia Electric Company is chairman of Subgroup 7 on Heat-Power Equipment Symbols which revised this standard.

[6] L. C. Bibber of the Carnegie-Illinois Steel Company, representing the American Welding Society, heads Subgroup 1 on Welding Symbols. The new American Standard Z32.2.1-1949 supersedes and is a revision of the American Standard Welding Symbols and Instructions for Their Use, Z32.1-1942 and is, therefore, not an amplification of any part of Z32.2-1941.

In the new classification, the symbols are arranged alphabetically with heads for major divisions. For example, in the revised standard on pipe fittings and valves, "Angle Valve" heads an alphabetically arranged section, while in the 1941 version there were no subdivisions or headings for this valve section. In the heating and ventilating standard, although both the old and new editions contain a section under the heading of "Traps," only the new version alphabetically lists the subdivisions under this head. Moreover, the symbols in the subdivisions of the new standard are simplified.

Since the aim of each standard is simplification, the title of each standard has also been made clearer. The phrase "for Use on Drawings" has been omitted, and the titles now begin with the phrase "American Standard Graphical Symbols for . . ."

Much work still remains to be done in the standardization of graphical symbols for other industries. The subgroup needed for work on mechanical gage and instrument symbols has not yet been organized, and various subcommittees that have been organized have not started work. When the specific industries indicate a demand for graphical symbols in their fields the subgroup on automotive industry symbols, aeronautic industry symbols, machine tool symbols, processing industry symbols, structural steel symbols, marine symbols, and bolt, nut, and rivet symbols will begin work.

Some work, however, is in progress at this time. A survey is being made of industries concerned with mechanical gage and instrument symbols and with processing industry symbols to find out what symbols in these fields are in use nationally so that standards can be established.

The use of surveys carried out under ASA procedure is one source of determining the need for changes and revisions of existing standards and also the need for the establishment of new standards. Another source is the suggestions for changes, comments, or criticisms of standards which various industries using specific graphical symbols sent to the ASA. In the case of the standards that have just been completed, voluntary suggestions and material received at the request of the ASA committee conducting the survey were accumulated and used as a basis for the enlargement of the old standards, the establishment of the new standard on Symbols for Railroad Equipment, and the inclusion of such revisions as were deemed essential.

It is hoped that as time goes on the work already accomplished in the establishment of graphical symbols, and the work that will be done, will result in a comprehensive collection of standards for every industry in the United States which uses symbols. ASA Sectional Committee Z32 will welcome suggestions and comments.

NOTE: The American Standard Graphical Symbols for Plumbing, Z32.2.2-1949, has been published and is now available at 40 cents per copy. The three other approved American Standards (American Standards Graphical Symbols for Pipe Fittings, Valves, and Piping, Z32.2.3-1949; American Standard Graphical Symbols for Heating, Ventilating and Air Conditioning, Z32.2.4-1949; and the American Standard Welding Symbols and Instructions for Their Use, Z32.2.1-1949) are now being published and will be available soon.

British Industry Studies U.S. Standards Work

A team of British industry representatives visited the United States during July to study simplification procedures and what they can accomplish in reducing production costs and in building up production output. The group carried out its study under the auspices of the Anglo-American Council on Productivity, operating in conjunction with the Economic Cooperation Administration.

The Anglo-American Council has explained in a report dated March-April 1949 that in studying methods of improving Britain's production record it has devoted much attention to standardization and simplification. It is particularly interested in simplification at the present time as an intermediate method that may be well suited to production problems in the U.K. In explaining this interest the Council declares:

"Many of the advantages of standardization have been achieved in the United States by an intermediate process known as 'Simplified Practice Recommendations.' These are recommendations to limit the range of sizes or grades of the product concerned, and do not normally cover other details. This intermediate stage would provide a means by which the work which is being done in the United Kingdom on the acceleration of standardization could be helped."

In further explanation of its position, the Council declares:

"The dependence of many branches of British industry upon export puts a curb on the possible degree of standardization of sizes, grades, or types of product that can be achieved without risking loss of markets. The Council is anxious, however, to restate with the greatest possible emphasis the particular benefits that can be gained from standardization, specialization, and simplification, and in no other way. These include the assembly of standardized components in preference to hand fitting; the use of specialized machinery and handling equipment; economy in capital demands; the adoption of straight-line methods and correct flow of work, with all that this in turn means by way of simplified clerical procedures and supervision."

The team spent four weeks in the United States conferring with trade associations, technical societies, and individual companies, as well as with government representatives.

Meetings were held with representatives of the American Standards Association, during which attention was called to important American Standards which contain simplification recommendations. The process of developing American Standards, in which all groups concerned have an opportunity to take part in work on the standard and have a voice in its approval, was thoroughly reviewed.

Conferences were also held with the Division of Commodity Standards of the National Bureau of Standards in regard to its simplification activities and with representatives of the Bureau of Federal Supply and the Federal Specifications Board in regard to simplification aspects of Federal Specifications.

Members of the team were:

Major General Crawford, (*Leader*), Director of Guy Motors, Ltd; Vice-President of the Society of Motor Manufacturers and Traders, and Chairman of its Standardization Committee, London, England

C. A. Martin, Consulting Engineer, The British-Thomson-Houston Co. Ltd, electrical engineers and manufacturers, Rugby, England

Robert Neill, a Director of Joseph Lucas, (Electrical), Ltd, London, England

Gordon Weston, Assistant Director, British Standards Institution, London, England

Bertram White, Technical Director, Federation of British Industries, 21 Tothill Street, London, S.W. 1, England

Cyril J. A. Whitehouse, Secretary to the Ministry of Supply Committee on Standardization, London, England

Handbook on Steel Published by BSI

The whole of the British steel industry has cooperated in compiling a new British Standard Handbook of Steel and Steel Products (B.S. Handbook No. 10) for the benefit of its users. The book contains three main parts made up of articles describing the manufacture of steel and of steel products; classified summaries of the essential technical requirements of British Standards for steel and steel products; and other information of general interest, such as methods of test, heat treatment definitions, and conversion factors. This material presents a comprehensive picture of British steel products, and a summary of all the standards that apply to them.

Two authorities of the industry itself—Mr Sinclair Kerr of the Lancashire Steel Corporation and Mr T. Jolly of Guest, Keen & Baldwin's, Ltd. served as an editing committee to prepare the final compilation.

The first of the three parts starts with a section of notes on the making and using of steels, which covers a brief explanation of the essentials of steel making, the meaning of such technical terms as "rimming" and "killed" steels, some factors to be borne in mind in the selection of a steel, and its heat treatment and ruling section.

There follow 17 sections on various steel products. In each, the manufacturing techniques are briefly described, and the applications and the dimensional and other limitations of the available products are discussed and illustrated, and as far as possible defined.

These sections deal with: Steel castings; Blooms, billets, slabs and sheet bars; Forgings; Drop forgings; Plates; Sheets; Tinplate, terneplate, and blackplate; Hot and cold rolled steel strip; Hot rolled bars and sections; Bright steel bars; Steel tubes; Wire and wire products; Tool steels; Rails; Steel sleepers; Railway wheels, tires, and axles; Steel supports for use in mines.

These are followed by a section of notes on wrought steels (En series). This section provides an exhaustive discussion of the range of wrought steels detailed in BS 970, and their respective uses.

It is in this part of the handbook that most of the illustrations are placed. There are 27 illustrations, for example, of various kinds of steel castings, 17 of forgings, 5 illustrating section and bar rolling processes, and so on.

Copies of Handbook of Steel and Steel Products (B.S. Handbook No. 10), published by the British Standards Institution, can be obtained from the American Standards Association at $7.50 per copy. This price includes duty and postage. The book is 674 pages, 8½ x 5½ in., with stiff cloth covers. It has 58 pages of halftone illustrations and many drawings in line.

The second part of the book summarizes the great number of British Standards that have been drawn up for British steel and steel products. For convenience these are grouped into 15 sections, as follows: Steels for general engineering—Bars, billets, drop forgings and forgings, sheet and strip, castings; Steels for electrical engineering; Structural steel, including sections; Steels for ships; Pressure vessels materials; Gas cylinders; Railway materials; Tramway materials; Aircraft materials; Colliary materials; Tubes and tubular products; Wire and wire products; Rivets, bolts, nuts, and fastenings.

These are followed by a List of British Standards on welding or which include requirements on welding.

The final part of the book assembles much information about British Standards relevant to the subject, but usually found scattered in various publications. In 12 sections various tensile, bend, cupping, impact, hardness and proof tests are detailed, and there are notes on chemical analysis, British and continental test pieces, the correlation of Izod and Charpy test results and various other matters. There are also sections of heat treatment terms and definitions, and many tables of conversion factors.

The handbook is fully indexed.

Membership Requirements Considered For Technical Organizations

Though final action has not yet been taken, the Committee on Professional Recognition of Engineers' Council for Professional Development is well on the way to agreement on a recommendation to national engineering societies that membership grades and minimum qualifications for membership be standardized.

Three essential grades of membership are contemplated: Member, associate member, and student member, with two other grades suggested for those societies that may wish to adopt them: Fellow, and affiliate.

A member shall have had an engineering degree, with at least four years of important engineering experience, and with at least two years of the four spent in responsible charge of engineering work. If not a graduate he shall have had at least ten years of engineering experience satisfactory to the society. A license to practice professional engineering, or the passing of an examination prescribed by the governing board of the engineering society involved, or teaching experience may also be accepted as qualifying experience.

An associate member shall be a graduate of an engineering or physical science curriculum; or, if not a graduate, he should have had at least six years of professional experience.

A student member shall be an undergraduate or graduate engineering student in the professional field of the society.

A fellow is purely an honorary grade for engineers of distinction for which the member makes no application.

The affiliate grade would apply to nonprofessional engineers, who cooperate with engineers in the advancement of engineering knowledge and practice.

Comment on the above suggestions is invited by the Secretary of ECPD, 14th floor, 29 West 39th Street, New York 18, N. Y.

From 1852 . . . .

The American Society of Civil Engineers

97 years span the development of a great technical and professional society, first national group of its kind in U.S.

IN 1839, 40 men—civil engineers from 11 of the 27 then existing states of the Union—met in New York to exchange ideas and information. From recommendations made at that meeting grew the first great national technical society organized in the United States, forerunner of all the numerous societies that now form a network throughout the engineering fields.

When the organization of a professional society for "civil" engineers was first proposed, "civil" was defined as meaning work in the civilian field as opposed to engineering for military purposes. Before that time most of the outstanding engineers had been military officers, the first important engineering school having been at West Point.

The gathering of civil engineers in New York was recognition of a new era in engineering achievement. Only shortly before—in 1830—the first locomotive had been placed in regular service in the United States. Production of locomotives started in the same year. New techniques were required to build roads and bridges strong enough to support such heavy machines. The growth of industries and development of better transportation facilities helped build up the cities, with a corresponding increased demand for waterworks, pumping engines, systems of drainage, and gas works. This great expansion of engineering activity was reflected in the need for orderly coordination and dissemination of engineering information.

As first proposed, the new "American Society of Civil Engineers and Architects" opened its membership to "civil, geological, mining and mechanical engineers, architects, and other persons, who, by profession are interested in the advancement of science." Its purpose was "the professional improvement of its members, the encouragement of social intercourse among men of practical science, the advancement of engineering in its several branches, and of architecture, and the establishment of a central point of reference and union for its members." These general provisions still remain in the ASCE constitution.

The methods to be followed in attaining these ends were outlined as "periodical meetings for the reading of professional papers, and the discussion of scientific subjects, the foundation of a library, the collection of maps, drawings and models, and the publication of such parts of the proceedings as may be deemed expedient." With only minor changes, this method of procedure has remained the same up to the present time.

Interest in the idea of the new society grew slowly, and it was 13 years after it was proposed before the organization meeting took place, in November 1852. In 1868 the first indication of the present "fragmentation"—organization of specialized engineering societies in the different fields of engineering—took place when the reference to the architects in the title of the Society was removed. This trend toward limiting the definition of "civil engineers" to those who design and build public works (bridges, roads, harbors, irrigation systems) took a more decided turn in 1871. In that year the second great technical professional society, the American Institute of Mining and Metallurgical Engineers, was founded. In 1871, the electrical engineers followed with organization of the American Institute of Electrical Engineers, and in 1880 the American Society of Mechanical Engineers completed the organization of the four "civil" engineering societies, now recognized as the Founder Societies. They own the Engineering Societies Building on Thirty-ninth Street in New York City and the Engineering Societies Library where one of the finest collections of literature on the science and technique of engineering is centralized in its national headquarters.

The work of the American Society of Civil Engineers is carried on by 13 technical divisions which sponsor research on engineering problems in their fields and hold meetings during the regular meetings of the Society. The pattern for Society meetings was set as early in its history as 1855 when the first formal paper was presented on "The Results of Some Experiments on the Strength of Cast Iron."

One of the first important research undertakings grew out of the Society's part on a Board set up by Act of Congress in President Grant's administration "for the purpose of determining, by actual tests the strength and value of all kinds of iron, steel, and other metals which may be submitted to them." Their work culminated in the construction of a large testing machine and its erection at the Watertown Arsenal where systematic tests of iron and steel were made by the Ordnance Department of the Army.

The 13 present technical divisions reflect the range of civil engineering activities: Air transport; city planning; construction; engineering economics; highway; hydraulics; irrigation; power; sanitary engineering; soil mechanics and foundations; structural; surveying and mapping; waterways.

Interest in Standards Stems from Way Back

The interest of the Society in standardization was evidenced early in its history. During the period of its early development, committees were active on cements, preservation of wood, iron and steel, railway signals, means of averting bridge accidents, and uniform methods of testing materials. This was in addition to a committee on standardization of the metric system of weights and measures. The Society's standard rail section, used by all the railroads when first developed, was forerunner of the present rail standards of the American Railway Engineering Association. A Committee on Uniform Standard Time, first appointed in 1881, was largely instrumental in obtaining adoption of a prime meridian as a zero for computing longitude and reckoning time throughout the world

by intervals of one hour, the Society reports.

In 1918, this interest in standards put the Society on record as one of the first to act to bring about an orderly procedure for coordination of standards developed by the various societies. When the greatly expanded use of standards to meet production requirements of the First World War brought a demand for a national clearing house, the American Society of Civil Engineers joined with the American Institute of Mining and Metallurgical Engineers, the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, and the American Society for Testing Materials in setting up the American Engineering Standards Committee (now the American Standards Association).

The Society has continued its interest in the national standards program as a Member-Body of the American Standards Association. In this role it is one of the national organizations that is responsible for the policies and operations of ASA. It takes an active part in the technical work on standards, with representatives on 30 sectional committees. The Society has the sponsorship for four of these, and is a member of both the Building Code Correlating Committee and the Highway Traffic Standards Committee, as well as the Standards Council.

In its own organization, the Society administers the work of its technical divisions through a Committee on Division Activities. A Technical Procedure Committee coordinates the activities of all the Division technical committees.

Manuals of engineering practice prepared by the technical committees or by joint committees of the technical divisions present information useful to the civil engineer in his everyday work. The Manual of Engineering Practice, No. 27, on Pile Foundations and Pile Structures, for example, was prepared by the Joint Committee on Bearing Value of Pile Foundations of the Waterways Division, Construction Division, and Soil Mechanics and Foundations Division. Such a manual is a handbook, not in any sense a "standard," the Society explains. Twenty-nine such manuals have been published.

One of the most recent is a Glossary of Terms Used in Water and Sewage Control Engineering, prepared by a joint committee representing the American Public Health Association, the American Society of Civil Engineers, the American Water Works Association, and the Federation of Sewage Works Associations. This glossary was given careful study by a large number of people in the fields concerned before it was finally adopted.

The 28th manual, the Hydrology Handbook, was published in August of this year. It is expected that engineering schools may find it useful as a textbook. It was written by five or six of the outstanding experts on the subject in the United States.

In carrying out its responsibilities for the technical development of the profession, the Society arranges that new theories, and discussions of new ideas brought out as the result of research, are presented to ASCE members in the technical meetings. The most important papers are published for their benefit in the Society's *Proceedings*. The *Transactions* include both the technical papers and all discussions about them. The 113 volumes published to date represent a record of the nation's technical progress in civil engineering. The Society's monthly magazine, *Civil Engineering*, presents timely articles of professional and technical import, together with news of the ASCE.

Works for Promotion Of Engineering Profession

In addition to its technical activities, the ASCE has committees which work on behalf of civil engineering as a profession. Their responsibilities include consideration of employment conditions, education of prospective civil engineers, and qualifications of active engineers.

Manual 29 is a revision of the Manual on Fees, representing the professional side of the Society's activities. The earlier edition of this book was published in 1930, and the many changes in the economic picture in this country since that time are reflected in the new 1949 edition.

While considering that it has responsibility itself for the professional as well as technical welfare of its members, the ASCE is working with the other societies in the Engineers' Council for Professional Development, which aims to develop higher professional standards of engineering education and practice and public recognition thereof.

It is also working with the other societies in encouraging recent attempts to counteract the effect of "fragmentation" in the engineering profession. Specialization has been carried to such an extent that almost every branch of engineering now has its separate society. The Engineers' Joint Council was organized by the Founder Societies and the American Society of Chemical Engineers to work toward greater professional unity. The Council's outstanding accomplishment has been its reports on Germany and Japan prepared for use by the State Department and the occupying forces in planning to what extent and in what fields the industries of those countries should be developed to support a civilian and not a military society. In cooperation with the Bureau of Labor Statistics the Council has also prepared a study of engineering employment and compensation.

In EJC activities for the professional welfare of its members, the ASCE has taken the lead on collective bargaining for engineers and all professions. Through the work done under its leadership, the Taft-Hartley Act (1948) specifically provides that any member of a profession may choose whether or not he will belong to an employees' union.

Membership Is On Personal Basis

Membership in ASCE is on a personal basis. A Member must be a professional engineer of experience and standing. A Junior, or lower, grade of membership is provided for engineers entering the profession and in the early stages of their development. Every member belongs to a local section. These sections are located in every state in the Union as well as in Hawaii, Puerto Rico, Isthmus of Panama, Brazil, and Venezuela. In addition, 128 student chapters are organized in schools where the civil engineering curriculum is acredited by the Engineers' Council for Professional Development. More than 10,000 students are enrolled in student chapters.

Honorary membership is given to an engineer with an outstanding record in his profession or in public affairs. This group is selected with care, as shown in the fact that there are 26,300 ASCE members and 40 honorary members.

Affiliate membership is available to those who have all the qualifications of a member and have worked closely with civil engineers, but are not civil engineers by education. A water chemist, for example, an expert in his own line, works closely with civil engineers and might qualify as an affiliate—or a biologist or a contractor might similarly qualify.

The policies of the Society are handled by a Board of Direction, made up of the president of the Society, two immediate past presidents, four vice-presidents, and 19 directors elected by the membership to represent them.

ASTM Reviews the Year's Activities

ONE reason why the American Society for Testing Materials is so well known in industrial and technical circles and why it holds its present outstanding position was indicated at the 52nd Annual Meeting of the Society at Atlantic City, June 27-July 9. At a special luncheon during the meeting, awards were made to a group of individuals and companies who have been affiliated with the Society continuously for 50 years. A larger group of 40-year members was also recognized. This affiliation goes back prior to the formal organization of the Society in 1902, and extends to the period when what is now the American Society for Testing Materials was a Committee of the International Association for Testing Materials. The committee was organized in 1898.

In addition to this record of co-operation, another 50-year record of service was celebrated during the meeting. At the session on steel and the effect of temperature, Committee A-1 on Steel, the first ASTM technical committee to be organized, presented its Fiftieth Annual Report. Today, the committee has to its credit 150 widely used specifications.

The activities of the Society "must be kept closely attuned to the needs of those whom it serves," Richard L. Templin, retiring president, said in his address in "The Progress of ASTM." "With the primary objectives of promoting the knowledge of and the standardizing of materials and test methods, many opportunities are presented for expanding the scope of the activities of the Society," he said. "The need for more standards and test methods suitable for the development and application of new materials is very much in evidence."

Mr Templin cited examples where further work needs to be done. "In past years, for example," he said, "emphasis has been placed upon test methods which were intended to be a part of material or product specifications. In many instances the methods have been defined only in sufficient detail suitable for routine inspection tests. When these tests are used for more precise investigation of the material, the deficiencies in the test method details often become manifest."

May Improve Products, Help Develop New Ones

A leader in research work, Mr Templin stressed one important phase of the use of standard methods which is not too well recognized. "Many tests not directly a part of product specifications are often used for the improvement of commercial products and the development of new products. Currently too few of the users of these tests appreciate the merits of suitably standardized test methods for the purposes just indicated. In most tests, factors exist which, if not properly controlled, will cause substantial variations in test data. These

J.G. Morrow Is New President of ASTM

Its first president from outside the United States was elected by the American Society for Testing Materials at its annual meeting June 27-July 9. J. G. Morrow, metallurgical engineer with the Steel Company of Canada, Ltd., new ASTM president, is well known in the standardization field for his active work with the Canadian Standards Association. Mr Morrow, chairman of the CSA, was the Canadian representative on the work of Unification of Screw Threads. He has been a member of ASTM since 1911, and has been particularly concerned with the work of ASTM Committee A-1 on Steel.

During World War II, Mr Morrow was technical advisor to the Canadian Steel Controller and chairman of Technical Advisory Committee on Alloy and Special Steels, Department of Munitions and Supply, Ottawa. He also served on the Administrative Committee, United States National Emergency Steel Specifications, War Production Board (representing Canada). He was appointed vice-president, Atlas Plant Extension, Limited, a Crown Company incorporated to augment Canada's supply of alloy steel and gun forgings.

Mr Morrow represents the Canadian Standards Association on the Sectional Committee on Classification and Designation of Surface Qualities, B46.

Frank E. Richart, Research Professor of Engineering Materials, University of Illinois, was elected vice-president by the Society. Professor Richart has been in charge of the concrete research laboratory and graduate teaching in concrete at the University of Illinois since 1926. He has prepared numerous reports and technical papers and directed a great volume of research and testing work. He is a member of the Board of Directors of the American Concrete Institute and was president of the Institute in 1939.

Members of the Board of Directors are:

Robert D. Bonney, Assistant Manager of Manufacturing, Congoleum-Nairn, Inc, Kearny, N. J.

C. H. Fellows, Head of Chemical Division, Research Department, The Detroit Edison Company, Detroit, Mich.

Harrison F. Gonnerman, Assistant to Vice-President for Research and Development, Portland Cement Association, Chicago, Ill.

Norman L. Mochel, Manager of Metallurgical Engineering, Westinghouse Electric Corporation, Philadelphia, Pa.

M. O. Withey, Dean of the College of Engineering, University of Wisconsin, Madison, Wisc.

differences in results may be erroneously attributed to the variables being studied, whereas in reality they are caused by uncontrolled variations in testing procedure."

Latest developments in the use of radiography, including high speed techniques, were covered in seven papers, representing one of two groups of papers sponsored by Committee E-7 on Nondestructive Testing. A discussion of the initial work with the first industrial type mobile betatron at the Naval Ordnance Laboratory was included. The second group of papers featured ultrasonic testing. The discussion stressed the fact that this procedure is practical and is being widely used, not only as an inspection tool but as an aid to manufacturing processes.

Other discussions of interest to those in the metals field covered the fatigue of metals, and a two-session symposium on rapid methods for identifying metals. General principles, as well as applications to particular classes of metals and alloys, were covered.

The application of the SR-4 type of gage to the testing of cast iron was described in another two-session symposium.

Papers in the session on steel and the effect of temperature at which tribute was paid to Committee A-1 on Steel, stressed the importance of control of manufacturing practice in connection with steels for high-temperature service, and the great influence of deoxidation practice. Of special interest were some data on silicon-aluminum killed steels.

The testing of poles came in for considerable discussion since it is an involved subject and the difficulty of interpreting test results without any standardized procedures have increased.

Authors of ten technical papers in a symposium on evaluation tests for stainless steels gave a critical appraisal of the tests now used. They stressed the question of how to relate the tests on a large number of alloys to practical conditions in different environments.

Of interest to those concerned with bituminous materials was a two-session symposium on accelerated durability tests.

Various aspects of plastics, particularly impact, flexure, and fatigue testing, were covered in a special session. Inge Lyse, formerly of Lehigh University and for many years at the Norway Institute of Technology, discussed concrete for airport runways, suggesting a novel method of construction.

Development of standards for examining water-borne industrial wastes—one of the newer phases of the Society's work—was the subject of a round-table discussion. Several speakers dealt with the availability of procedures for waste with high concentrations as compared with the methods that are available for high dilutions.

Technical Committee Progress Featured at Meeting

Progress in its standardization and technical committees was especially featured at the meeting—with 450 meetings of technical committees held throughout the week. On the recommendation of the ASTM technical committees, 77 new tentative specifications and methods of test were aproved, and almost 100 previous tentatives are to be adopted as formal standards. Many other specifications and tests were revised and brought up to date. All of these will be published in the 1949 *Book of Standards* to be issued in six Parts late in the year.

Plans Are Announced For Pacific Coast Meeting

Plans for its first Pacific Coast Area National Meeting to be held in San Francisco, October 10-14 have been announced by the American Society for Testing Materials. Fifteen technical sessions will be held from Monday afternoon through Thursday afternoon, October 13. Ten technical committees have already scheduled meetings:

C-1 on Cement
C-9 on Concrete and Concrete Aggregates
C-12 on Mortars for Unit Masonry
C-15 on Manufactured Masonry Units
C-19 on Structural Sandwich Constructions
D-2 on Petroleum Products and Lubricants
D-4 on Road and Paving Materials
D-7 on Wood
D-8 on Bituminous Waterproofing and Roofing Materials
D-18 on Soils for Engineering Purposes

In addition, Committee A-3 on Cast Iron is sponsoring the Symposium on Cast Iron; and Committee D-1 on Paint, Varnish, Lacquer and Related Products is in charge of the presentation of New Methods for Testing Paint and Paint Materials that forms part of the Paint Sessions.

The Research Division on Elemental Analysis, of Committee D-2 will be responsible for a Symposium on Modern Chemicals and Instrumental Methods for the Determination of Metals in Petroleum Products. A Symposium on Diesel Engine Deposits is being arranged by Committee D-2's Technical Committee F on Diesel Fuels.

Nominations for ASA Council, Board of Review, Board of Directors

Walter C. Wagner, Electric Light and Power Group, has been nominated for election as chairman of the Standards Council for 1950, and J. R. Townsend, American Society for Testing Materials, for vice-chairman, according to the announcement of the Nominating Committee of the Standards Council.

Nominated for the Board of Review are J. R. Townsend; R. G. Griswold, American Gas Association; A. S. Johnson, National Association of Mutual Casualty Companies; E. B. Paxton, American Institute of Electrical Engineers; T. E. Veltfort, Copper and Brass Research Association; and J. V. Stroop, American Petroleum Institute.

According to the ASA By-Laws, nominations for officers of Standards Council and Board of Review may also be made by petition signed by at least one representative of each of five or more Member-Bodies. Election will be by letter ballot of Member-Body representatives on the Standards Council.

Ten Member-Bodies were also nominated by the committee as being eligible to nominate members of the Board of Directors. From this group five were selected by the Board at its meeting on June 17 as follows: the American Iron and Steel Institute, the American Society of Mechanical Engineers, the Association of American Railroads, the Anti-Friction Bearing Manufacturers, the Automobile Manufacturers Association.

Recent Actions on Commercial Standards

Commercial Standards are issued by the Commodity Standards Division of the National Bureau of Standards. They are voluntary standards developed through cooperation of manufacturers, distributors, and users and are made effective by means of voluntary certification of compliance by manufacturers on invoices, labels, or by grade marks on the goods themselves.

As explained by the Division, the purpose of Commercial Standards is "to establish standard methods of test, rating, certification, and labeling of commodities, and to provide uniform bases for fair competition."

Many Commercial Standards have been approved as American Standards, cleared through the nation's coordinating agency — the American Standards Association. All Commercial Standards are printed and made available by the Department of Commerce through the Government Printing Office, and the Superintendent of Documents.

To Check Sun Glass Lenses

Commercial Standard, CS 159-49, covers Sun Glass Lenses Made of Ground and Polished Plate Glass Thereafter Thermally Curved. Specifications include optical properties, tolerances, methods of test, and freedom from defects that impair the serviceability of sun glass lenses. The published standard is now available at 10 cents per copy.

Revision of Hosiery Standard

Fourth edition of the standard, CS46-49, for Hosiery Lengths and Sizes has been accepted and now includes men's athletic and crew socks, and men's and boys' slack socks. It provides standard methods of measuring, and standard measurements of hosiery in order to establish a uniform basis for guaranteeing full-length and full-size hosiery.

For Rayon Underwear

Printed copies of Commercial Standard CS148-48, covering Men's Circular Flat and Rib Knit Rayon Underwear, are now available. Established to serve as a guide and to eliminate the confusion resulting from a diversity of size markings, the standard gives specifications for track pants, knitted athletic shirts, knitted polo shirts, and ribbed and flat knit union suits.

Continuing in the knit underwear department, Commercial Standard CS155-49, on Body Measurements for the Sizing of Apparel for Boys (For the Knit Underwear Industry), is now available. The purpose of the standard is to provide a height-weight system for sizing boys' apparel. The Boys' Apparel and Accessories Manufacturers' Association, Inc., has recommended the use of these standard sizes to its members for boys' shirts, trousers, jackets, and other outer clothing.

Douglas Fir Plywood

Eighth edition of the standard, CS 45-48, for Douglas Fir Plywood is in an improved form, in that it covers the four basic grades of veneer, namely, "A", "B", "C", and "D", and then the plywood grades as made from these veneers. The present edition covers detail requirements for six grades of Exterior type and seven grades of Interior type. Two new grades have been introduced in both types. This has been made possible by the introduction of the B quality veneer which has a solid surface. In most grades Douglas fir plywood is produced in several stock sizes of widths from 30 to 48 in. and lengths from 60 to 144 in.

On Mineral Wool Insulation

Covering minimum physical and chemical requirements of mineral wool for use at low temperatures, Commercial Standard CS105-48 is now available in printed form. Requirements are given for the insulation in loose, granulated, felt, industrial batt, and board or block forms. The booklet includes thicknesses of insulation required for various operating temperatures, specifications for auxiliary materials, tests, installation requirements, and method of guaranteeing compliance with the standard.

For mineral wool insulation for heated industrial equipment, a revision of the 1941 edition of the Commercial Standard on Mineral Wool: Blankets, Blocks, Insulating Cement, and Pipe Insulation for Heated Equipment CS117-49, is now available. It is now known as Commercial Standard on Mineral Wool Insulation for Heated Industrial Equipment, CS117-49. The major changes are the inclusion of requirements for loose, granulated, and felted forms of mineral wool, together with nine new illustrations and two revised illustrations showing methods of fastening and application of the insulation to various types of heated surfaces.

Eight Grades—Pine Plywood

Printed copies of Commercial Standard CS157-49 covering Ponderosa Pine and Sugar Pine Plywood can now be obtained. This standard covers requirements for eight grades of a moisture-resistant interior type plywood made from ponderosa pine and sugar pine. In addition, the standard includes test requirements, standard sizes, size tolerances, inspection rules, labeling, nomenclature and definitions.

For Tufted Bedspreads

A recommended Commercial Standard for Tufted Bedspreads, TS-4781, has been submitted to producers, distributors, and users for acceptance. This recommended standard covers two sizes (twin and double), with plus and minus tolerances, methods of test, and means for identification of the material conforming to the recommended standard.

The industry expects to expand this standard by the addition of quality requirements for the backing and tufting yarn, colorfastness, and other elements of quality, the National Bureau of Standards announces.

Model Forms for Girls' Apparel

A Commercial Standard on Model Forms for Girls' Apparel has been approved in the absence of active opposition and may be considered effective for new production from December 1, 1949. The standard is known as CS158-49. It will be issued in printed form for sale by the Superintendent of Documents as soon as practicable.

Properties of a Wood Preservative

Copper naphthenate wood preservative for spray, brush, or dip application is now covered in Commercial Standard CS152-48. The purpose of the standard is to provide a nationally recognized specification for the guidance of buyers, sellers, and testing laboratories, providing a basis for labeling. Physical and chemical characteristics, and methods of test are given for copper naphthenate products in either concentrated or ready-to-use form.

May Change "Standard Observer"

From the National Bureau of Standards

Recent work at the National Bureau of Standards indicates that the "ICI standard observer," that is, the fundamental data on color mixture—accepted internationally since 1931 for interpreting colorimetric measurements—may need to be revised. This work corroborates findings from three other laboratories in this country, Harvard Medical School, Eastman Kodak Company, and National Lead Company.

Modern colorimetry depends upon a break-down into its component spectral parts of the light entering the eye of the observer. The spectral transmittance of standard filters and the spectral reflectance of opaque color standards are measured by means of the spectrophotometer. Since the recommendation in 1931 by the International Commission on Illumination, the standard way of interpreting such spectrophotometric information has used the body of fundamental data on color mixture known as the 1931 ICI standard observer. These data have achieved world-wide aceptance for this purpose, and in the United States particularly the ICI standard observer has found hundreds of practical applications.

Considerable interest was, therefore, aroused by a report that the ICI standard observer was not adaptable to the colorimetry of titanium-pigment paints. When the well-known, near-white anatase and rutile titanium dioxide pigments were incorporated in a paint vehicle, they yielded colors that could be distinguished by eye. However, spectrophotometric data reduced by means of the ICI standard observer indicated that the colors were the same. It was suggested that the ICI standard observer weighs too lightly the spectral region below 430 mu.

As the first step in a study of the phenomenon by Dr Deane B. Judd of the Bureau's photometry and colorimetry laboratory, a pair of these titanium-pigment paints was examined by seven observers. Four of the seven corroborated the conclusion described above; three agreed closely with the standard observer. A modification of the standard observer was then derived, based upon the spectral luminosity determinations of Gibson and Tyndall at NBS and of Wald at the Harvard Medical School. The modified observer was shown to account largely for the observations of four of the observers that disagreed with the standard observer. Since this work, the Gibson-Tyndall-Wald data on spectral luminosity have had striking corroboration by Weaver of Eastman Kodak; his results likewise indicate the standard luminosity function to be too low in the short-wave extreme of the spectrum.

It has been recommended that further studies of the luminosity function in this region be conducted, particularly by foreign laboratories, so that a broad and sound basis for a possible revision of the ICI standard observer may be laid. Until such time as a revision is made officially by an international body, however, NBS will continue to base its color standards on the 1931 ICI standard observer.

Mr. Palmer Points to a Guide for Buyers

"The new ASA standard [American Standard Specifications for Bleached Cotton Bed Sheets and Pillowcases, L4.1-1948] gives hospitals a means of maintaining minimum quality requirements in their purchases of sheets and pillowcases," Dewey H. Palmer, research director of the Hospital Bureau of Standards and Supplies, says in an article published in the July 1949 issue of the magazine, *Hospitals*. Mr Palmer lists the American Standard requirements and shows how various brands of sheets compare according to tests made by the Bureau.

"No standard is any better than the use that is made of it by the consuming public." Mr Palmer declares. "Although all the major manufacturers have agreed to abide by the requirements set forth for the particular types covered in this standard, hospital purchasing agents in placing their orders should always specify the type referred to in the ASA standard for sheets and pillowcases.

"In most instances, tests should show that the sheets are well above the limits specified. In its testing the Hospital Bureau of Standards and Supplies has found several brands that failed to meet the requirements set forth in the new standard. Some brands have been consistently well above the minimum requirements."

Schedule for Annual Meeting

The Thirty-First Annual Meeting of the American Standards Association, Incorporated will take place at the Waldorf-Astoria Hotel in New York from October 11 through October 14. Detailed plans are still being made but the general schedule will be as follows:

October 11, Tuesday—Meetings of sectional committees and correlating committees

October 12, Wednesday—Company Member Conference

October 13, Thursday

Morning—Conference of Executives of Organization Members of the ASA

Afternoon—Reports on international developments in standardization by American delegates to the ISO meetings held in Paris this summer

Evening—Board of Directors

October 14, Thursday

Morning—Standards Council Meeting

Noon—Annual Meeting Luncheon: Speaker: Karl T. Compton, chairman, MIT, and chairman of the Development Board of the National Military Establishment

Afternoon—Joint Meeting of the Board of Directors and the Standards Council

ASA members invited to attend and participate in discussions

Mexico--

Reports New Electrical Code; Standards for Many Products

FROM word recently received from the Mexican Ministry of National Economy, the ASA has been been informed of the preparation of a new National Mexican Electrical Code which is being carried out by the General Electrical Administration (Direccion General de Electricidad), a department of the Ministry. The completed code is to be a revision of the old National Electrical Code which was first prepared in 1926 by the Ministry of Industry and Commerce.

The work of revising this 1926 code was started about 1938 when a committee made up of government officials of the Ministry of National Economy was formed. In taking over this work the General Electrical Administration is using foreign electrical specifications among which are certain American Standards.

In 1939, soon after the revision had begun, a second edition of the 1926 code was published. Moreover, in February 1939, a law concerning the entire electrical industry of Mexico was published in the official *Diario Oficial*. This law, which is enforced by the Secretary of the Ministry of National Economy, covers the production and distribution of electrical energy and establishes certain safety measures to be taken in the electrical field. This law is used in conjunction with the code which covers the installation of electrical wiring and equipment.

The preparation of the code in 1926 was the first official standardization work to be accomplished in Mexico. The next attempt in establishing a regular standardization program was made early in 1943 with the establishment of the General Standards Department (Direccion General de Normas) by the Ministry of National Economy. This government department (known in abbreviated form as DGN) is the only standardizing body in Mexico.

Heading this organization are Rafael Illescas Frisbie, Director, Manuel Torres Torija, Assistant Director, and Luis Muguia Valdez, Chief of DGN. It is under their direction that the preliminary draft of a standard is prepared.

Industry and Consumers Consider Proposed Standards

The draft is sent to various manufacturers and consumers who might be especially interested in the proposed standard. In a subsequent meeting of the manufacturers, consumers, and the DGN, the draft and possible amendments and changes are discussed. In the event that agreement cannot be reached, a special committee is formed to study the draft further. However, upon general agreement the draft with its eventual amendments is approved and published in the government gazette. It thus becomes an approved Mexican Standard.

These standards are mandatory for purchases made by all Mexican Federal Government departments, but their adoption by private industry remains entirely voluntary.

Seventeen groups of standards are contained in the standardization program; altogether, according to ASA records, there are 136 Mexican Standards. The greatest amount of standardization has been done in the metal products group which has established 31 standards. Some of the most important of these are for blast-furnace pig iron, steel bars or rods used in reinforced concrete, ordinary steel rail, zinc ingots, embossed silver products, linotype metal, stereotype metal, and refined tin. The chemistry group also contains 31 standards, a few of which are for commercial arsenate of calcium, red oxide of mercury, glycerine, cacodylate of magnesium, silver nitrate, the official quality standard for potassium chlorate, and citric acid crystals.

Important work has been accomplished in the establishment of 20 standards in the textile field. For example, there are standards for raw khaki, pepper-and-salt cloth, henequen twine, cotton thread for covering magnet wire, definitions and terms used in the henequen industry, linen thread for shoe-sewing machines, display stand cotton covers, jeans, "Panama" linen cloth, and "Holland" linen cloth. Intensive work has also been carried out in the development of 20 standards in the construction materials field. Some of these are for portland cement, hydrated lime for construction, hydrated hydraulic lime, plain concrete sewer pipe, concrete pipes for irrigation, vitrified clay pipes, hollow clay blocks, rectangular prismatic fire clay bricks, and the terminology for fire clay pieces.

There are three standards on untanned hides and skins of cattle, nomenclature of tanned and untanned hides and skins, and untanned goat skins or hides in the group on leather, hides, and skins. The wood industry group is also limited to three standards, one of which is on Mexican pine lumber and timber. There are two standards in the oil refining field, one in the paper industry group, and one in the glass industry.

Standards are still to be developed in the vehicles group, the workmen's wearing apparel group, the ceramics group, the photographic and cinematography group, and the tobacco group.

New Officers for Standardizing Bodies

In Great Britain . . .

New appointments in the British Standards Institution have been announced. Roger Duncalfe was elected chairman of the General Council; John Ryan, M.C., was elected chairman of the Finance Committee; and Herbert J. Manzoni, C.B.E., was elected chairman of the Building Divisional Council.

. . . And in Germany

According to the January issue of *Mitteilungen aus der Deutschen Normung*, officers have recently been elected to the German Standards Association. These are: Dr Erich Siebel, president; Dr. H. H. Frank, first vice-president; and Dr. Kurt Koloc, second vice-president.

Roumania-- Reorganizes Standards Agency

The Roumanian Commission for Standardization, in a recent letter to the American Standards Association, has requested an exchange of information on standards. This commission was set up by decree in November, 1948, as the Roumanian state organization officially appointed for the establishment and promulgation of standards for the whole of Roumanian production. The use of its standards is compulsory.

In many respects the new commission seems to resemble the former governmental Office for Rationalization and Standardization which as a department of the Ministry of Industry and Commerce in 1930 dealt exclusively with specifications for government works and purchases. These specifications were obligatory for all government agencies. The Roumanian Standardization Commission, which was established as Roumania's first standardizing body in 1928 and is now defunct, was a private and voluntary standardizing body closely cooperating with the government Office for Rationalization and Standardization.

The actual technical work of the new Roumanian Commission for Standardization is done in technical committees of specialists who are invited by the commission and approved by the president of the organization. The method of preparation of draft standards is established by the commission which has prepared long and detailed instructions to cover all technical and practical points of Roumanian draft standards—including the size of the standard itself and its orthography—the official orthography of the Academy of the Roumanian People's Republic.

Like other administrative departments in Roumania the commission consists of a president, vice-president, and three members. The president of the Commission has full administrative power over the work of the other members of the commission. He also handles the Commission's funds.

Unlike the former Roumanian Standardization Commission which was an active member of the International Standards Association, the new Commission for Standardization does not yet belong to the International Organization for Standardization.

This first issue of the *Bulletin* commission is the *Bulletin of Standardization*. Its January-April, 1949 issue is listed as Year one, No. 1-4. This magazine is printed, of course, in Roumanian. The table of contents is not only printed in Roumanian but also in 8 different languages which are Russian, French, German, English, Czech, Polish, Hungarian, and Bulgarian.

This first issue of the *BULLETIN* contains two draft standards in their initial form. They are for square shanks of tools and for "fat" lime. The draft standard for "fat" lime is followed by a comparative study between this Roumanian draft and two existing similar standards, one Russian (GOST 1147) and the other German (DIN 1060).

South Africa-- Tests Packaging for Eggs

The South African Bureau of Standards reports the start of a series of tests which, to say the least, calls for the greatest devotion to the cause of standardization on the part of those assisting in carrying them out. The tests are designed to determine what effect different types of packaging materials have on the flavor of eggs, and the results will be used in deciding which materials are best suited to egg packaging. After being stored for 31 days in packages made of the sample materials, under standard conditions, the eggs have to be tasted to see whether they have taken on any undesirable flavor. For reference purposes, the judges are allowed to smell and taste a newly laid egg before smelling and tasting the test eggs. Each judge then enters on a score sheet his findings as to the condition of each egg tasted—"fresh," "flat," "strong," "foreign," "stale," "sour," or "rotten."

The test conditions have been made as standard as possible. Before being tasted, the eggs are boiled for $2\frac{3}{4}$ minutes. Clean spoons are used for each egg. To avoid any contamination of flavor, the judges wash their mouths between each taste with a weak solution of peroxide and water.

The results obtained from the first series of tests have indicated that flavor can be subjected to fairly definite quantitative measurements, the Bureau reports.

Austria— Checks and Modernizes Work

The Austrian Standards Association announces that it now has over 60 actively working technical committees and subcommittees. Since the end of the war this association has for the most part rechecked all its standards in order to bring the most important ones up to date and has weeded out those which were superfluous and which in many cases were imposed upon the Austrian Association during the period of the "Anschluss."

The technical committees of the association are divided into 8 groups which cover the most important fields of Austrian industry. Group I handles general subjects such as standard methods for technical calculation, decimal classification, and technical drawings. Group II is concerned with standards for the building industry. Standards for the chemical industry are developed by Group III, and electrical engineering is covered by Group IV. Group V carries on the work on power (hydraulic installations and gas apparatus). Group VI handles the fire brigade (fire extinguishers and life savers), and Group VII works on the field of mechanical engineering. Group VIII, which covers traffic, is now studying standardization of road signs.

Standards from Other Countries

MEMBERS of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Orders may also be sent to the country of origin through the ASA office. The titles of the standards are given here in English, but the documents themselves are in the language of the country from which they were received.

For the convenience of our readers, the standards are listed under their general UDC classifications.

003. Writing

France

Symbols Used in Theoretical Mechanics, NF X 02-103

Poland

Mathematical Symbols, PN N-01050
Proofreader's Symbols, PN N-06001

389 Metrology

Poland

Preferred Numbers. Explanations, UNE 4003 h2
Standard Reference Temperature, UNE 4008

511 Arithmetic. Theory of Numbers

Finland

Rules for Rounding Numerical Values, A.I. 25

615.47 Medical Instruments. Apparatus

Union of Soviet Socialist Republics

Rubber Ice Bag, GOST 3302-46
Rubber Ring Air Cushion, GOST 3304-46
Rubber Enema Bottles, GOST 3305-46
Rubber Tube for Blood Transfusion, GOST 3399-46
Stomach Sounds and Catheters, GOST 3400-46

620.17 Tests of Strength

Finland

Vickers Hardness Tests, H.I. 15
Hardness Numbers After Vickers, H.I. 16

621-0 /-9 Machinery and Apparatus

Union of Soviet Socialist Republics

Cylindrical Gears, Tolerances, GOST 1643-46
Wheels and Boxes of Traveling Cranes, Dimensions, GOST 3569-47-3571-47
Worm Gears, Tolerances, GOST 3675-47
Grates of Stationary Boilers Fireboxes, Types and Dimensions, GOST 3682-47
90° Angle Gage, GOST 3749-47
Knapsack Sprayers, Types, Specifications, GOST 3837-47
Vertical Turrets, Basic Dimensions, GOST 3859-47
Round Turntables, Basic Dimensions, GOST 3861-47
Coal Mine Skips With Vertical Shafts, Type and Basic Dimensions, GOST 3866-47
Pitch Gage for Basic Pitch of a Gear, GOST 3883-47
Plugs for Locomotive Pipes, GOST 3912-47
Water Shut-Off Valves for Tenders, GOST 3930-47
Internal Combustion Motors, Numbering of Cylinders, GOST 4021-48
Pile-Drivers' Sheaves, GOST 4052-48
Needle Bearings With One Outer Raceway, GOST 4060-48
Ball Bearings, Single-Row Radial Types With Felt Packing, GOST 4061-48
Shut-Off Valves, Check-Valves of Malleable Cast Iron, Types and Standard Dimensions, GOST 4066-48
Cooling Apparatus for Milk and Other Liquid Food Products, GOST 4072-48
Cream Processing Trays, GOST 4098-48
Household Sewing Machines, Class 1-A, GOST 4114-48
Agricultural Machinery, Driving Chains Made of Stamped Hook-Links, GOST 4187-48

621.1 Steam Engines

Union of Soviet Socialist Republics

Locomobiles, GOST 3492-46

621.3 Electrical Engineering

Germany

Index to DIN Electrotechnical Standards, DIN 40000
Plug-Type Contact Strips, DIN 41621
Buster Transformers, DIN 42514
Transformer's Filling and Ventilating Plug, DIN 42553
Transformer Cooling Coil, DIN 42563
Squirrel-Cage Three-Phase Motors, Dimensions, DIN 42670
Control Handles of Electric Automobiles, DIN 43555
Powerswitch for 16 2/3 cycles/sec. Lines, DIN 43613
Shaft-Ends for Switches, DIN 46060
Incandescent Lamps, General, DIN 49801
Discharge Lamps, DIN 49804, Bl.1
Various Types Incandescent Lamps, DIN 49812
Rules for Installation of Fluorescent Lamps, DIN 57128
Rules for Protection of Gas- and Water-Lines From Detrimental Action of Electric Current From DC Tramway Lines Using Rail as Return Conductor, DIN 57150
Regulations for Electric Appliances Used in Places Containing Explosive Gases, DIN 57166
Regulations for Insulated Wires, DIN 57252
Regulations for Voltage Indicator up to 1000 v, DIN 57425
Regulations for Construction and Testing of Small Voltage and Small Power Transformers, DIN 57550
Specifications for Cables Used for Inside Wiring of Telecommunication Installations, DIN 57813
Specifications for Flexible Cords Used in Telecommunication Installations, DIN 57817
Plug-Type Contact Strips, Dimensions, DIN 41622
Telecommunication, Four-Pole Plug, DIN 41701
Self-Cooling Three-Phase Oil-Transformers 50 Cycles/Sec., Series Set Up to kva and 20 kv, DIN 42501
Self-Cooling Three-Phase Oil-Transformers 50 Cycles/Sec., Copper Winding, Normal Induction Nominal Rating 2000 to 10000 kva, DIN 42504
Transformers, Construction Materials for Sizes From 20 to 1600 and Voltage up to 20 kv, DIN 42517
Transformers, for Sizes from 50 to 1600 and Voltage up to 30 kv, DIN 42518
Transformers, for Sizes from 2000 to 10000 and Voltage up to 120 kv, DIN 42519
Rectifier-Transformers, Three-Phase, 50 Cycle/Sec., DIN 42528
Capacitors for Improvement of Power Factor, Technical Data, DIN 48500
Electric Lamps, Ordinary and Shock Proof, DIN 49810, Bl.1
Portable Electric Lantern, DIN 49951
Regulations Relative to Danger of Corrosion of Bare Neutral Wires in Three-Wire DC. Installations, DIN 57151
Specifications for Electric Dredging and Drilling Machines Used in Mining, DIN 57168
Rules for Using Water Pipes for Grounding Electric Installations With Voltage up to 250 v, DIN 57190
Letter- and Graphical-Symbols for Designation of Electric Machines and Transformers Terminals, DIN 57570

Japan

Vacuum Tube Accessories, JES 5851
Precision Type and Ordinary Noise Meters, JES 8316/7, 1502/3

Poland

Copper Electric Conductors, PN E-5
Three-Phase Transformers, 50 Cycles, 20-1600 kva, PN E-201

621.8 Machine Parts. Hoisting and Conveying Machinery. Power Transmission. Means of Attachment. Lubrication

Austria

Hexagon Head Screws, Unfinished, ÖNORM M-5010
Hexagon Head Screws, Fully Threaded ÖNORM M-5011
Step Bolts, Unfinished, ÖNORM M-5016
Wheel Bolts, Unfinished, ÖNORM M-5018
Plow Bolts, Round Head, Reverse Key Countersunk, ÖNORM M-5022

France

Hexagon-Head Machine Screws, Automobile Series, PN R931-19
Hexagon-Head Machine Screws, With Drilled Hole at the Tip, PN R931-20
Hexagon Nuts, Plain and Slotted, Automobile Series, PN R932-11
Spring Washers "Grower" Type, PN R933-20

Germany

Set Screws, Sizes M 1 to M 20, DIN 427
Round Nuts With Slots or Holes for Prongs of a Spanner, DIN 546, 547, 548
Bolts, Countersunk, With Reverse Key, DIN 1439
Buttress Screw Thread, DIN 513
Oil Cans, DIN 6423

Poland

Diameters of Bolt and Stud Holes, PN M-02046

Washers, Round, Square, Etc., PN M82005
Lock Washers, Various Types, PN M82012-82017; 82026-82028
Screws, Bolts, Nuts, Various Forms and Sizes, PN M82062-82-69; 82101-82120; 82155-82158; 82291/2
Studs, PN M82125-82142
Machine Screws, Flathead, Oval Head, Etc., PN M82207/8; 82233/4; 82237; 82240; 82251-82254; 82257/8
Set Screws, Plain and Socket Head, PN M82271; 82311-82316
Socket Head Cap Screws, PN M82303
Plow Bolts, PN M82401-82410
Studs, Tee-Bolts, Eye-Bolts, PN M82413-82432
Wing Nuts, Knurled Nuts, Etc., PN M82435-82440
Knurled-Head Screws, PN M82458-82460
Round Nuts, Special Forms, PN M82463-82471
Lifting Eye Bolts, PN M82472/3
Lag Screws, PN M82501/2
Wood Screws, PN M82503/4/5
Rivets,, PN M82904-82904-82907
Keys, PN M85005-85008
Splined Shafts, PN M85015
Pins, PN M85022

621.9 Machine Tools. Tools. Operation, in Particular for Metal and Wood

Austria

Morse Tapers, ÖNORM M-4302

Germany

Screen for Air Duct of Pneumatic Hammer, DIN 8534
Pneumatic Hammer Hoze Nozzles, DIN 8535
Mallet, DIN 6490
Punch, DIN 7251
Guide Shaft for Punching, Stamping, Etc. Machines, DIN 9825

Japan

Various Types of Grinders and Grinding Tools, JES 4101; 4271T-4274T
Various Types of Gear Hobs, JES 4751; 4821/2/3; 4831/2; 4851

Poland

Twist Drills, PN N107-109; 111-113; 161
Reamers, PN N195-200
Taper Shanks, Morse Tapers, PN N266; 270-272
Lathe Centers, PN N431/1; 438
Lathe Dogs, PN N435/6
Grinding Wheels, PN N860-864; 867-871; 876; 878/9

625.8 Paving of Roads

Union of Soviet Socialist Republics

Natural-Road-Building Stone Materials, Method of Testing of, GOST 3586-47 through 3588-47

629.11 Land Vehicles. Transport Engineering

France

Tail Reflector With Central Attachment Bolt, PN R143-15
Tail Reflector With Two Attachment Eyelets, PN R143-16
Tail Reflector, Flush Type, PN R143-20
Motorcycle's Head Lamp, PN R243-02
Bicycle's Front Hub for 8 mm Axle, PN R327-63
Bicycle's Front Hub for 9.5 mm Axle, PN R327-70
Bicycle's Rear Hub Assembly for 9.5 mm Axle 120 mm Long, PN R327-78
Bickely's Rear Hub Assembly for 9.5 mm Axle 111 mm Long, Dimensions, PN R327-79
9.5 mm Bicycle's Rear Axle, 111 mm, PN R327-80
Bicycle's Rear Hub Assembly for 8 mm Axle, 102 mm, PN R327-86
Bicycle's Rear Hub Only for 8 mm Axle, 102 mm, PN R327-87
Tail Reflectors for Bicycles, Etc., PN R343-10
Cutter Pin, Automobile Type, PN R934-02
Outer Spring Ring, PN R942-01
Inner Spring Ring, PN R942-02

Japan

Three-Wheel Trucks and Their Parts, JES 4801, 5103, 5601, 5701, 6201
Electric Automobiles, JES 0053, 0509, 0511/2
Piston Rings, JES 4201
Grease Nipples, JES 2202

Poland

Automotive Vehicles, General Dimensions, Characteristics, PN S0211-0216
Electric Motors and Equipment for Mechanical Vehicles, Standard Voltages, PN S0231
Clutch Lining, PN S4728
Disc Wheels, PN S4735
Rubber Protective Rings for Electric Wiring, PN S7603
Electric Cable Eyes and Ferrules, PN S7611-7622

Union of Soviet Socialist Republics

Motorcycles, Command Handles, Levers and Pedals, GOST 3185-46
Bicycles, Front Hub Assembly, GOST 3500-47
Bicycles, Handlebars, GOST 3538-47
Bicycles, Front Fork, GOST 3539-47

629.13 Aeronautics

Union of Soviet Socialist Republics

Aeronautical Equipment, Vibration, Determination and Measurement of, Units and Symbols, GOST 2922-45

633.88 Medicinal Plants

Union of Soviet Socialist Republics

Lily of the Valley (Herb), GOST 3319-46
Licorice (Powder), GOST 3320-46
Dried Roots of a Shrub of Thorn Family (Acanthophyllum Glandulosum), GOST 3448-46

651 Office Organization. Office Management

Poland

Various Standard Printed Forms for Hospital Records, PN Z-09001, -09006/7, -09022, -09028/9, -09034, -09036/7, -09045

Spain

Application of Series A of the UNE 1011 (Paper Sizes), UNE 1012
Envelope Sizes, UNE 1015
Window Envelopes, UNE 1017
Form of Printed Standard, UNE 4002

655.3 Printing Machinery

Union of Soviet Socialist Republics

Printing Machines, Standard Types According to Types and Sizes of Paper, GOST 45-48

664.82 Vegetable Preserves

Union of Soviet Socialist Republics

Sauerkraut, Specification, GOST 3858-37
Fruit- and Berry-Extracts, GOST 3865-47
Preserved Vegetables, Fruits and Berries in Standard Wooden Containers, GOST 3975-47
Pickled Vegetables, GOST 1633-46
Pickled Cucumbers, GOST 1634-46

664.9 Preservation of Foodstuff of Animal Origin

Union of Soviet Socialist Republics

Dryed "Mintai" (Fish of Cod Family), GOST 3872-47
Spiced Pickled Fish (Pelchard, "Salaka", "Khamsa"), GOST 3944-47,-3945-47
Pickled Herring, GOST 3946-47
Spiced-Pickled Herring, GOST 3947-47
Salted Salmon, GOST 1863-46

666 Glass and Ceramic Industry. Artificial Stone

Belgium

Portland Cement, Definition and Specifications, NBN 48
Blast-Furnace Slag Cement, Definition, Specifications, NBN 49
Blast-Furnace Clinker Portland Cement, Definitions, Specifications, NBN 130
"Permetallurgique" Cement (70% Slag, 30% Clinker), Definition, Specification, NBN 131
Blast-Furnace Slag Cement With High Percentage of Tri-Sulfur Oxide, Definition, Specifications, NBN 132
Cements, Sampling and Testing of, NBN 178

Japan

Mould for Pottery Use, JES 1901

Union of Soviet Socialist Republics

Refractory Bricks, GOST 389-41
Clay, GOST 3594-47

669 Metallurgy

Germany

Aluminum Alloy Bands and Strips, DIN 1784
Aluminum Shapes, Angle, Channel, Tee, DIN 1748

Japan

Standard Methods of Gold and Silver Assaying, JES 2101
Cupola Melting Process, JES 9002T
Aluminum Alloy, Corrosion Resistant, JES 7102T
Zinc Alloy Die-Castings, JES 7481
Aluminum- and Aluminum-Alloy Plates, Dimensions (Revised), JES 0801

Poland

Chemical Analysis of Iron and Steel, Sulfur Content, PN H-04015
Chemical Analysis of Iron and Steel, Nickel Content, PN H-04018
Chemical Analysis of Iron and Steel, Molybdenum Content, PN H-04019
Chemical Analysis of Iron and Steel, Vanadium Content, PN H-04020
Chemical Analysis of Iron and Steel, Copper Content, PN H-04024
Chemical Analysis of Iron Ore, PN H-04105; 04109/10/11
Brinell Hardness Test, PN H-04350
Spring Steel, PN H-84032

ASA STANDARDS ACTIVITIES

Status as of August 1, 1949

American Standards Approved Since July 1, 1949

Method of Test for Accelerated Aging of Vulcanized Rubber by the Oxygen-Pressure Method (ASTM D572-48; ASA J4.1-1949)

Method of Test for Accelerated Aging of Vulcanized Rubber by the Oven-Method (Revision of ASTM D573-48; ASA J5.1-1949)

Sponsor: American Society for Testing Materials

American Standards Being Considered for Approval

By the Standards Council—

Dimensions for Professional Portrait and Commercial Sheet Film (Centimeter Sizes), Z38.1.29 (Revision of Z38.1.29-1944)

Sheet Film Processing Tanks, Z38.8.15

Specifications for Lantern Slide Projectors, Z38.7.14 (Revision of Z38.7.14-1944)

Sponsor: Optical Society of America

35-mm Cutting and Perforating Negative Raw Stock, Z22.34 (Revision of Z22.34-1944)

Sponsor: Society of Motion Picture Engineers

By the Board of Examination—

Addenda to American Standard Approval Requirements for Domestic Gas Ranges, Z21.1 (Revision of Z21.1-1948)

American Standard Listing Requirements on Gas Hose for Portable Gas Appliances, Z21.2 (Formerly American Standard Listing Requirements for Flexible Gas Tubing, Z21.2-1938)

American Standard Approval Requirements for Domestic Gas-Fired Incinerators, Z21.6 (Formerly American Standard A.G.A. Approval Requirements for Incinerators, Z21.6-1932)

Addenda to American Standard Approval Requirements for Hot Plates and Laundry Stoves, Z21.9 (Revision of Z21.9-1948)

American Standard Approval Requirements for Gas Water Heaters, Z21.10 and Addenda (Revision of Z21.10-1944 and Addenda Z21.10-1945)

American Standard Approval Requirements for Gas-Fired Room Heaters, Z21.11 (Formerly American Standard Approval Requirements for Gas Space Heaters, Z21.11-1948)

Addenda to American Standard Listing Requirements for Gas Valves, Z21.15 (Revision of Z21.15-1944)

Sponsor: American Gas Association

Nomenclature, Definitions, and Letter Symbols for Screw Threads, B1.7

Sponsor: Society of Automotive Engineers; American Society of Mechanical Engineers

By the Safety Code Correlating Committee—

Safety Code for Rubber Mills and Calenders, B28.1 (Revision of B28a-1927)

Sponsor: National Safety Council

By the Mechanical Standards Committee—

Stainless Steel Pipe, B36.19

Plain Washers, B27.2

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

By the Consumer Goods Committee—

Definitions of Terms Relating to Textile Materials, (Revision of ASTM D123-48; ASA L14.1949)

Methods of Test for Asbestos Yarns (Revision of ASTM D299-48T; ASA L14.18-1949)

Methods of Test for Woolen Yarns (Revision of ASTM D403-48T; ASA L14.21-1949)

Methods of Test for Worsted Yarns (Revision of ASTM D404-48T; ASA L14.22-1949)

Methods of Testing and Tolerances for Jute Rope and Plied Yarns for Electrical Packing Purposes (Revision of ASTM D681-48; ASA L14.44-1949)

Sponsor: American Society for Testing Materials

By the Electrical Standards Committee—

Electron Tube Bases, Caps, and Terminals (RMA Standard ET-130-A; NEMA Publication, 500-A)

Dimensional Characteristics of Electron Tubes (RMA Standard ET-105-A; NEMA Publication 502-A)

Dimensional Characteristics of Gaskets for Water-Cooled Transmitting Tubes (RMA Standard ET-104; NEMA Publication 501-A)

Sponsor: Joint Electron Tube Engineering Council

Standards Submitted

Vulcanized Fibre, C59.20 (Revision of C59.20-1945)

Sponsor: American Society for Testing Materials

Method of Rating and Testing Refrigerant Expansion Valves, B60

Recommended Practice for Mechanical Refrigeration Installations on Shipboard, B59

Sponsor: American Society of Refrigerating Engineers

Revisions Submitted

National Electrical Code, C1

Sponsor: National Fire Protection Association

American Standards Reaffirmed

Jig Bushings, B5.6-1941; R1949

Rotating Air Cylinders, B5.5-1932; R1949

Machine Tapers, Self Holding and Steep Taper Series, B5.10-1943; R1949

Spindle Noses and Arbors for Milling Machines, B5.18-1943; R1949

Sponsor: American Society of Mechanical Engineers

Withdrawal of American Standards Being Considered

Test for Tetraethyl Lead in Gasoline, ASTM D526-42; ASA Z11.48-1942

Requested by: American Society for Testing Materials

Approval Requirements for Private Garage Heaters, Z21.4-1932

Approval Requirements for Gas Heated Ironers, Z21.7-1932

Approval Requirements for Industrial Gas Boilers, Z21.14-1934

Listing Requirements for Low Water Cut-Off Devices, Z21.36-1945

Requested by: American Gas Association

Recommended Practice for Engineering Nomenclature for Motion Picture Theaters, Z22.30-1941

Recommended Practice for Sensitometry of Motion Picture Film, Z22.26-1941

Projector Sprockets for 16-Mm Motion Picture Film, Z22.6-1941

8-Tooth Projector Sprockets for 8-Mm Motion Picture Film, Z22.18-1941

Requested by: Society of Motion Picture Engineers

New Projects Requested

Rotary Cone Valves

Requested by: American Society of Mechanical Engineers

Uniform Industrial Hygiene Code

Requested by: American Conference of Governmental Industrial Hygienists

What's Happening on Projects

Drain Tile, A6—

Sponsors: American Society for Testing Materials; U.S. Department of Agriculture.

This project has been discontinued and the American Standard Specifications for Drain Tile (ASTM C4-24; ASA A6-1925) has been assigned to the American Society for Testing Materials as proprietary sponsor to care for future revisions. This action was taken by the Standards Council at its meeting June 16 on request of the ASTM, with the U.S. Department of Agriculture concurring. The ASTM Committee on Drain Tile, C-4, has been discontinued and the subject assigned to ASTM Committee C-15 on Manufactured Masonry Units. A subcommittee on drain tile has been set up under this committee.

Pipe Flanges and Fittings, B16—

Sponsors: American Society of Mechanical Engineers; Heating, Piping, and Air Conditioning Contractors National Association; Manufacturers Standardizing Society of the Valve and Fittings Industry

The American Standard on Ferrous Plugs, Bushings and Locknuts with Pipe Threads, B16.14-1949, and the American Standard on Brass or Bronze Screwed Fittings, 250 Lb., B16.17-1949, were recently approved as American Standards by letter ballot of the ASA and are now available.

Bolt, Nut, and Rivet Proportions, B18—

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers, Inc

As administrative sponsor for Sectional Committee B18, the American Society of Mechanical Engineers announces the distribution for comment of the proposed revision of American Standard High Strength, High Temperature Internal Wrenching Bolts.

"This standard," according to its scope, "is intended for use in high strength applications, such as steam turbine work, where fasteners are subjected to high temperatures of the order of 800 to 900 F for long periods of time. In comparison with standard socket head screws that are widely used for general purposes, this standard covers fasteners with larger head proportions to provide greater area on the bearing surface of the head and to assure greater strength in the head and wrenches than in the body or threaded portion of the bolt in view of materials and other factors involved. The bolts have cylindrical heads to permit spot peaning of the top of the head in a counterbore where this method of locking is desired."

Copies of this document can be obtained from S. A. Tucker, Standards Manager, American Society of Mechanical Engineers, 29 West 39th Street, New York 18, N. Y.

Plain and Lock Washers, B27—

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers, Inc

A letter ballot has been circulated to the members of the Mechanical Standards Committee on the recommendation that the proposed American Standard, Plain Washers, B27.2, be approved as an American Standard.

Code for Pressure Piping, B31—

Sponsor: American Society of Mechanical Engineers

F.S.G. Williams, manager of Eastern sales of the Taylor Forge and Pipe Company, is the new chairman of the reorganized Sectional Committee B31, and Sabin Crocker of the Ebasco Services, Inc has been elected vice-chairman.

The scope of the project now covers the "design, manufacture, fabrication, test, installation, and operation of pressure piping systems."

Standardization of the Dimensions and Material of Wrought Iron and Wrought Steel Pipe and Tubing, B36—

Sponsors: American Society of Mechanical Engineers; American Society for Testing Materials

The American Society of Mechanical Engineers, as administrative sponsor for Sectional Committee B36, announces the distribution for comment of a proposed American Standard for Wrought-Steel and Wrought-Iron Pipe.

According to the scope of this proposed standard "the word *pipe* is used as distinguished from *tubing*, restricting the term *pipe* and therefore the scope of these standards, to apply to tubular products of dimensions and materials commonly used for pipe lines and connections."

There are seven tables in this document. Specifications for pipe with ASA designations and titles of standard specifications, dimensions of welded and seamless steel pipe, nominal weights of welded and seamless steel pipe, dimensions of welded wrought-iron pipe, and nominal weights of welded wrought-iron pipe are covered in these tables.

Copies of the tentative draft can be obtained from S. A. Tucker, Standards Manager, American Society of Mechanical Engineers, 29 West 39th Street, New York 18, N. Y.

Electrical Insulating Materials, C59—

Sponsor: American Society for Testing Materials

The ASTM has submitted to the ASA for approval the proposed revision of the American Standard for Vulcanized Fibre, C59.20-1945. This is a standard of the National Electrical Manufacturers Association, which was originally approved as an American Standard in 1945.

Office Standards, X2—

Sponsor: National Office Management Association.

George T. Vanderbilt, of the Standard Oil Company of Ohio, has accepted the chairmanship of this committee. An employee of Standard Oil for 32 years, Mr Vanderbilt is now director of the Organization and Methods Planning section for the Accounting Department of that company. Formerly he served as manager of the Sales Accounting Office, which handles the accounting of sales for the entire company and also as assistant to the vice-president on industrial relations for the Finance and Accounting Department.

Mr Vanderbilt's interest in the office standards program dates from its inception. For almost three years he has served as chairman of the NOMA Operating Committee on Business Machines and as chairman of the Subcommittee for Business Machines under the ASA project.

He is vice-president of the Cleveland Chapter of NOMA.

(Continued on page 248)

(*Continued from page 247*)

More than 40 national associations representing the distributor, consumer, and manufacturer of office items and practices are represented on the ASA project. At present, subcommittees are at work in these fields: Office Supplies; Forms, Records, and Procedures; Business Machines; Office Paper; and Office Equipment (Furniture).

Subcommittee on Office Equipment (Furniture), X2-1—

Proposed standard dimensions for desks and tables, a proposed standard for color finishes for wood desks, desk top linoleums, and colors and dimensions of file cabinets were discussed in a recent meeting of the Subcommittee on Office Equipment (Furniture), X2-1. In the discussion of office lighting it was reported that the proposed standard of the Illuminating Engineering Society's Committee on Office Lighting is to be submitted to the ASA for approval as American Standard.

It was also suggested that definite action by the Joint Subgroup of Subcommittee on Cut Form Sizes be delayed until the proposed drafts on desk and table sizes have been made available.

Subcommittee on Forms, Records, and Procedures, X2-3—

Steps in establishing and maintaining a forms control program, printing specifications for business forms, standards for bank checks, standard sizes for continuous forms, and symbols for procedural study were among the topics discussed in a recent meeting of ASA Subcommittee on Forms, Records, and Procedures, X2-3.

In the discussion on standard sizes for continuous forms, it was pointed out that the proposal of the Standards Committee of the Business Forms Institute dealing with sizes of continuous forms would most likely be submitted to the ASA subcommittee in the fall of this year.

Safety Code for Exhaust Systems, Z9—

Sponsors: American Industrial Hygiene Association; American Society of Heating and Ventilating Engineers; National Association of Fan Manufacturers

The first draft of the proposed American Standard Code for Safety and Ventilation of Open Surface Tank Operations, Z9.1, has been completed and is being submitted to members of the subcommittee and the ASA Sectional Committee on Open Surface Tank Operations, Z9, for comment and suggestion. This proposed American Standard is a revision of the American Standard on Safety in Electroplating Operations, Z9.1-1941.

The scope of the revised draft covers "the protection of operators from contact with gases, vapors, mists, or liquids used in, created, released, or disseminated by the operations to which this code applies and the design of ventilating systems for controlling and removing said gas, vapor or mist." The rules presented in this version are not intended to cover the protection from fire of personnel, equipment, or structure associated with open surface tank operations.

There are eight detailed appendixes in this draft. Appendix A is a table of maximum allowable concentration, flash point, boiling point, and relative evaporation of substances commonly used in tanks. Since the scope of ASA Sectional Committee on Allowable Concentrations of Toxic Dusts and Gases, Z37, includes the determination, establishment, and promulgation of allowable concentration limits, it is expected that Appendix A will be referred to Committee Z37 for concurrence before it is adopted by Committee Z9.

Four appendixes show drawings of typical forms of enclosing hoods, of lateral exhaust hoods, of canopy hoods, and means of general room ventilation. The remaining appendixes list materials for hoods and ducts resistant to corrosion by various substances and processes, suggested velocities to compensate for room cross drafts at tank level, and sample calculations.

Letter Symbols and Abbreviations for Science and Engineering, Z10—

Sponsors: American Association for the Advancement of Science; American Institute of Electric Engineers; American Society of Civil Engineers; American Society of Mechanical Engineers; and Society for the Promotion of Engineering Education

Subcommittee Z10.7 has almost finished incorporating letter symbols for secondary concepts into its proposed American Standard on the Standardization of Letter Symbols for Aeronautics and Aerodynamics, Z10.7.

On Use of American Standards

Safety Shoes—

The Fall 1949 general Montgomery Ward catalog will carry a statement to the effect that Ward's steel toe shoes are carefully designed and constructed to meet "American Standard Z41.1" specifications for safety toe work shoes approved by the American Standards Association.

Plumbing Code—

The Bureau of Environmental Sanitation of the New York State Department of Health announces that the Department has accepted the American Standard Plumbing Code, A40.7-1949 as the standard plumbing code recommended by the Department for adoption by municipalities in New York State. Arrangements are being made to distribute it to all cities and to first and second class villages immediately and to recommend their favorable consideration of its adoption.

Masonry—

The American Standard Building Code Requirements for Masonry, A41.1-1944, has been made a part of the revised Syracuse building code which is shortly due for passage by the City Council.

Factory Inspection for Safety—

The Oklahoma State Legislature has enacted a bill which authorizes Jim Hughes, Commissioner of Labor, of the Oklahoma Department of Labor, to use American Standard safety codes in factory inspection work. The American Standard codes used will be those in existence at the time the Act became effective.

This bill provides for the establishment of a division of factory inspection under the direction of the Commissioner of Labor who will appoint a factory safety inspector to exercise general supervision over the division.

The bill states that the commissioner will prescribe applicable safety codes approved by the ASA and codes of the U. S. Public Health Service for the factory safety inspector's use in safeguarding machinery, elevations, and platforms, and in providing adequate ventilation and sanitation for various establishments. Some of the establishments to be visited by the inspector are railroad offices, merchandising and manufacturing establishments, mills, plants where machinery is used, offices in which five or more persons are employed, and theaters where mechanically operated apparatus is in use.

Use of X-Rays—

The need for proper precautions in the use of fluoroscopic apparatus for fitting shoes, particularly on growing children, has again been emphasized. Much furor was caused recently in Washington by alarm over the potential danger of excessive radiation or over-exposure.

That use of this apparatus may constitute a hazard unless the dose is properly regulated is agreed. Safe practice rules—included in American War Standard Z54.1-1946, Safety Code for the Industrial Use of X-Rays—pertain directly to this type of shoe-fitting machine. These include maximum exposure, warning signs to be placed near the equipment, and limitations on use.

FIRE gutted this telephone central office...

...but STANDARDIZATION helped repair the damage in a hurry!

WHEN fire wrecked this central office, almost 10,000 telephones were cut off from service. But, while the flames were still raging, the resources of Western Electric were being mobilized to assist the telephone company in restoring service as fast as humanly possible.

Equipment and materials needed were rushed from the nearest Western Electric distributing house—and from Western Electric's works in Chicago and Kearny, N. J.

By 11:30 the morning of the fire the first temporary switchboard was in operation. Just 11 days later service had been completely restored!

This meant not only *prompt* delivery of equipment but amazingly rapid *installation*.

The force of Western Electric installers in the area was supplemented by others called in from nearby states. Many of these teams of men had never worked together before. Yet . . . since Western Electric tools, techniques and equipment are thoroughly standardized, the new installation went forward smoothly and efficiently.

It's through standardization—in manufacturing, purchasing and distribution as well as in installation—that Western Electric is able to do efficiently its job of helping to make Bell Telephone service the best in the world at the lowest possible cost.

Western Electric

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Book Reviews

Appendix to Test Code for Steam Turbines. (American Society of Mechanical Engineers, 29 West 39th Street, New York 18, N. Y., $2.00; combination price with **Test Code for Steam Turbines,** $3.50)

Developed by the ASME Power Test Code Committee to facilitate the working up of steam turbine test reports, this section contains numerical examples of many of the calculations involved in reporting tests conducted under the Code rules. It also provides filled-out hypothetical test forms.

Standards of Retail Practice—Furnishing Fabrics. 1949 revised edition. Retail Trading-Standards Association, Inc, 356-366 Oxford Street, London, W.1, England, 1 s, 6 d, post free)

Retailers and manufacturers of furnishing fabrics will find this booklet useful in their dealings with the public in direct sale, advertising, and display. What the booklet does is define the correct usage in connection with descriptions, claims, and statements about fabrics used for furnishings in order to prevent the use of inaccurate or misleading practices or announcements. In two sections of general and departmental rules of the RTSA, this 28-page booklet covers material content, descriptions relating to manufacturing, general descriptions, identification of off grades (shop-soiled, second-hand, and imperfect merchandise), descriptions of sizes and measures, claims and statements concerning free gifts and services, bait offers, and slogans, to mention a few), presentation of description including type and layout, illustrations, and headings, and trade terms (including coined terms).

Standard Welding Terms and Their Definitions (American Welding Society, 33 West 39th Street, New York, N. Y., 50 pp., $1.00)

Standard Master Chart of Welding Processes and Process Charts (American Welding Society, 33 West 39th Street, New York, N. Y., $0.35)

Standard Welding Terms and Their Definitions contains more than 500 terms and 57 illustrations. Its preparation involved defining many basic concepts and distinguishing between related concepts such as "fusion," "penetration," and "bond"; "bead weld" and "weld bead"; "backing weld" and "back weld," to mention a few.

In order to verify the fact that basic terms are equally applicable to all of the welding processes a *Standard Master Chart of Welding Processes* has been prepared. This chart lists all 37 welding processes in commercial use today, and its accompanying *Process Charts* compare these processes on the basis of similarities and differences of 24 fundamental characteristics important in production welding.

On the basis that these charts would be equally helpful to users of welding they have been issued concurrently with the Standard Welding Terms.

ASTM Special Compilations

Collections of ASTM standards pertaining to specific fields are offered in book form. They can be obtained from the American Society for Testing Materials, 1916 Race Street, Philadelphia 3. ASTM members will receive the reduced cost marked.

Steel Piping Materials, over 50 specifications, $3.00, $2.25

Electrical Heating, Resistance, and Related Alloys, 31 standards, $2.25, $1.75

Petroleum Products and Lubricants, 768 pages, $5.50, $4.25

Paper and Paper Products, 296 pages, $2.50, $1.85

Electrical Insulating Materials, 90 standards, $4.50, $3.40

Standards for Students in Engineering, 294 pages. Especially compiled for use in technical school courses, this book is offered to student book stores at $0.75 on orders for ten or more copies. List price for all other purchases, $2.00

New Appointments to Standards Council

Changes in the membership of the ASA Standards Council have resulted in the appointment of the following new representatives:

Air Conditioning & Refrigerating Machinery Association—

C. E. Wilson of the Worthington Pump and Machinery Corporation succeeds George S. Jones, Jr. as representative from the Air Conditioning & Refrigerating Machinery Association.

American Institute of Electrical Engineers—

Charles R. Harte, engineer with The Connecticut Company, has been appointed to represent the AIEE.

American Society of Bakery Engineers—

Don Copell of the Wagner Baking Company has been named representative for the American Society of Bakery Engineers.

Tyler R. Stevens, chairman of the sanitation committee of the American Machine & Foundry Co, is to act as alternate for D. Copell.

American Society of Civil Engineers—

Maurice N. Quade of Parsons, Brinckerhoff, Hogan, & Macdonald, is the representative of the ASCE.

Jewell M. Garrelts, professor of civil engineering at Columbia University, is M. N. Quade's alternate.

American Society of Mechanical Engineers—

L. W. Kattelle, assistant chief engineer of the Walworth Company, succeeds W. H. Hill as representative of the ASME.

S. A. Tucker, alternate for L. W. Kattelle and H. B. Oatley, is standards manager of the ASME.

Associated General Contractors of America, Inc.—

William H. Fowler who is vice-president of the Dravo Corporation has been appointed representative for the Associated General Contractors of America, Inc.

W. L. Sharpe of the W. L. Sharpe Contracting Company is W. H. Fowler's alternate.

Cast Iron Pipe Research Association—

J. D. Capron has been appointed to succeed L. R. Dohm as representative for the Cast Iron Pipe Research Association. Mr Capron is president of the Glamorgan Pipe & Foundry Company.

Industrial Fasteners Institute—

William G. Waltermire, chief products engineer of the Lamson & Sessions Company, succeeds H. K. Cross as representative for the Industrial Fasteners Institute.

J. J. Kelley of the Pittsburgh Screw & Bolt Corporation succeeds W. G. Waltermire as alternate.

National Aircraft Standards Committee—

S. D. Daniels who succeeds C. E. Heywood as representative of the NASC is secretary of that committee.

National Association of Mutual Casualty Companies—

F. G. Smethurst, succeeding C. E. Pettibone, is to act as alternate for A. S. Johnson. Mr Smethurst is with the engineering department, home office divisions of the American Mutual Liability Insurance Company.

National Paint, Varnish and Lacquer Association, Inc—

Albert B. Bingham, divisional director of the Pittsburgh Plate Glass Company, succeeds J. C. Moore as representative of the National Paint, Varnish and Lacquer Association, Inc.

John C. Moore, alternate for A. B. Bingham, is director of the scientific section of the National Paint, Varnish & Standards Council.

Telephone Group

L. W. Hill, representative for the Telephone Group, is president of the Carolina Telephone & Telegraph Company.

C. M. Mapes, transmission engineer of the American Telephone and Telegraph Company, succeeds F. A. Cowan as representative for the Telephone Group.

George Richert is acting as alternate for L. W. Hill. Mr Richert is with the U. S. Independent Telephone Association.

REBIRTH *of a* SALESMAN?

FAR FROM IT, because Bristol Brass salesmen never went dead on their feet, even when there was almost nothing to sell. They always kept busy selling Bristol, when they couldn't sell Bristol Brass.

But now they have a new lease on life! They're literally "busting out all over" . . . with all Bristol Brass mill products solidly on the market . . . backed by the ancient and honorable Bristol quality . . . by new production equipment including continuous casting . . . and by closer co-operation with customers, via Bristol's new air-fleet service and special air delivery.

So if *you* use Brass sheet, rod and wire in anything from costume jewelry to electrical instruments . . . and if you like to do business with a young, fast-moving, *independent* supplier that doesn't have to play any favorites . . . then let's match our facilities, *and rather unusual abilities*, to your own product-problems. Call or write Joseph O'Brien, General Sales Manager, and tell him when you want a get-together. The Bristol Brass Corporation, Makers of Brass since 1850 at Bristol, Conn. 15 Park Row, New York City; 418 Frick Building, Pittsburgh, Penna.; 1607 South Broadway, Dayton, Ohio; 703 Temple Building, Rochester, New York; 538 Hospital Trust Building, Providence, R. I.

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FROM THE BRISTOL BRASS CORPORATION

New American Standards Available

ASA Number	Title of Standard	Price
C34.1-1949	Pool Cathode Mercury-Arc Power Converters	$1.20

Five sections cover definitions, standards, test code, recommended practice, and operating guide, plus a supplement on transformer equipment of rectifier units. Precise meanings are given for many new terms which have come into use since 1934. (*Sponsor:* American Institute of Electrical Engineers)

H32.1-1949	Brass Wire, Specifications for (ASTM B134-48)	.25

Specifications for seven alloys of round, hexagonal, octagonal, rectangular, and square brass wire are given. (*Sponsor:* American Society for Testing Materials)

J4.1-1949	Accelerated Aging of Vulcanized Rubber by the Oxygen-Pressure Method, Method of Test for (ASTM D572-48)	.25
J5.1-1949	Accelerated Aging of Vulcanized Rubber by the Oven Method, Method of Test for (ASTM D573-48)	.25

These methods are for estimating the relative resistance of vulcanized rubber to age deterioration by accelerated tests which are comparative only. (*Sponsor:* American Society for Testing Materials)

L14.14-1949	Cotton Sewing Threads, Methods of Testing and Tolerances for (ASTM D204-42)	.25
L14.15-1949	Osnaburg Cement Sacks, Specifications and Methods of Test for (ASTM D205-39)	.25
L14.16-1949	Woven Tapes, Methods of Testing and Tolerances for (ASTM D259-44)	.25
L14.17-1949	Certain Light and Medium Weight Cotton Fabrics, Methods of Testing and Tolerances for (ASTM D274-36)	.25
L14.19-1949	Relative Humidity, Method of Determining (ASTM D337-34)	.25
L14.20-1949	Holland Cloth, Specifications and Methods of Test for (ASTM D376-35)	.25
L14.24-1949	Strength of Rayon and Estron Woven Fabric when Wet, Method of Test for (ASTM D415-38)	.25
L14.25-1949	Pile Floor Covering, Method of Testing (ASTM D418-42)	.25
L14.27-1949	Certain Carded Cotton Gray Goods, Methods of Testing and Tolerances for (ASTM D433-39)	.25
L14.28-1949	Certain Wool and Part Wool Fabrics, Methods of Testing and Tolerances for (ASTM D462-44)	.25
L14.30-1949	Spun Rayon and Estron Yarns and Threads, Methods of Testing and Tolerances for (ASTM D507-44)	.25
L14.31-1949	Yarns Spun from Mixed Fibers, Methods of Testing and Tolerances for (ASTM D508-43)	.25
L14.33-1949	Rayon and Estron Staple, Methods of Testing (ASTM D540-44)	.25
L14.10-1949	Hard Scoured Wool in Wool in the Grease (Laboratory Scale Operations) Methods of Test for (ASTM D584-47)	.25
L14.41-1949	Asbestos Tubular Sleeving, Methods of Testing (ASTM D628-44)	.25
L14.42-1949	Certain Fine Staple Cotton Gray Goods, Methods of Testing and Tolerances for (ASTM D679-44)	.25
L14.43-1949	Certain All-Cotton and Cotton and Rayon Fine Fancy Goods, Methods of Testing and Tolerances for (ASTM D680-44)	.25
L14.45-1949	Rope (Leaf and Bast Fibers), Methods of Testing and Tolerances for (ASTM D738-46)	.25
L14.46-1949	Spun, Twisted, or Braided Products Made From Flax, Hemp, Ramie, or Mixtures Thereof, Methods of Testing and Tolerances for (ASTM D739-46)	.25
L14.47-1949	Compatibility of Glass Yarn With Insulating Varnish, Method of Test for (ASTM D886-46T)	.25
L14.48-1949	A Universal System of Yarn Numbering, Recommended Practice for (ASTM D861-47)	.25
L14.49-1949	Determination of Small Amounts of Copper, Manganese and Nickel in Textiles, Method of Test for (ASTM D377-47T)	.25
L14.50-1949	Cotton Goods for Rubber and Pyroxylin Coating, Standard Specifications and Methods of Test for (ASTM D334-40)	.25
L14.51-1949	Air Permeability of Textile Fabrics, Method of Test for (ASTM D737-46)	.25

These 24 standard methods of test are ASTM proprietary standards now approved as American Standards. (*Sponsor:* American Society for Testing Materials)

Z10.8-1949	Letter Symbols for Structural Analysis	.35

One of a group of standards concerned with letter symbols and abbreviations for use in science and industry. (*Sponsors*: American Society of Civil Engineers; American Institute of Electrical Engineers; American Society for Engineering Education; American Society of Mechanical Engineers; American Association for the Advancement of Science)

Z22.68-1949	Buzz-Track Test Film for 35-Millimeter Motion Picture Sound Reproducers	.25

Another in the series of specifications for the photographic industry, this standard describes a film for checking the lateral scanning slit placement in sound reproducers. (*Sponsor*: Society of Motion Picture Engineers)

Z38.8.6-1949	Photographic Processing Manipulation of Paper, Practice for	.50

Operations concerned with processing silver halide photographic layers on paper, involving developing, rinsing, fixing, washing, and drying, are covered. Reversal and color processes are not included. (*Sponsor*: Optical Society of America)